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# **The Implications of University Rankings for Taiwan's Higher Education**

**William Yat Wai Lo**

**A dissertation submitted to the University of Bristol in  
accordance with the requirements for award of the degree of  
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## Abstract

University rankings have become increasingly popular in recent years. The prevalence of league tables has intensified discussions about performance and competition in the higher education sector, including that of Taiwan. Rankings and the many related phenomena, like increased competition among institutions and systems, the pursuit of research excellence as well as the call for internationalisation and building world-class universities, have come into the centre of the discussion.

This thesis adopts a qualitative case study approach to provide a systemic delineation and interpretation of the implications of the ranking movement for Taiwan's higher education. It reviews the literature on different theories concerning the global transformation of higher education. It also gives basic information on Taiwanese higher education. Based on the literature reviewed, the thesis develops a four-dimensional framework for the analysis of the ranking phenomenon in Taiwan. The first dimension aims to look into how university rankings have impacted on Taiwan's higher education based on empirical findings from five Taiwanese public universities. The second dimension examines how Taiwan can use rankings to promote its interests in global higher education. The third and fourth dimensions focus on the connection between rankings and power in higher education. They show how the ranking phenomenon can be read and explained through theoretical lenses from ecological and geographical perspectives.

In regard to ecological perspective, the empirical evidence suggests that the influence of rankings varies throughout the academic hierarchy in Taiwan. The theoretical analysis then illustrates the link between the ranking phenomena and the power structure in academic hierarchy. As for the geographical perspective, while the empirical analysis is based on data from Taiwan, the theoretical analysis offers important insights for us to understand the changing global landscape of higher education and its implications for higher education in the East Asia region.

## Acknowledgements

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Notwithstanding all these generous assistances, the usual disclaimers apply; any errors and omissions in this work are entirely my own.



## Author's Declaration

*I declare that the work in this dissertation was carried out in accordance with the requirements of the University's Regulations and Code of Practice for Research Degree Programmes and that it has not been submitted for any other academic award. Except where indicated by specific reference in the text, the work is the candidate's own work. Work done in collaboration with, or with the assistance of, others, is indicated as such. Any views expressed in the dissertation are those of the author.*

SIGNED:

*Will No*

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DATE:

23<sup>rd</sup> September 2011

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## Notes on Usage

Throughout the text, I use the following short forms for place names for ease of expression. I recognise that, in constitutional terms, Hong Kong, Macao and Taiwan are all parts of China.

Hong Kong Special Administrative Region of the People's Republic of China	Hong Kong
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Macao Special Administrative Region of the People's Republic of China	Macao
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People's Republic of China	Mainland China/China
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Republic of China	Taiwan
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Throughout the text, I give all monetary amounts in New Taiwan dollars (NT\$). NT\$100 is roughly equal to £2.2.

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## List of Abbreviations

ACD	Asia Cooperation Dialogue
APEC	Asia-Pacific Economic Cooperation
Apex	Accelerated Programme for Excellence (Malaysia)
ARWU	Academic Ranking of World Universities
ASEAN	Association of Southeast Asian Nations
ASEAN+3	Association of Southeast Asian Nations Plus Three
ASEM	Asia-Europe Meeting
BK21	Brain Korea 21 (South Korea)
CNT	College Navigator in Taiwan (Taiwan)
COE21	Centre of Excellence in the 21st Century (Japan)
CSIC	Consejo Superior de Investigaciones Científicas
CSSCI	Chinese Social Sciences Citation Index (China)
DPP	Democratic Progressive Party (Taiwan)
EGM	Emerging Global Model
ESI	Essential Science Indicators
EU	European Union
GATS	General Agreement on Trade in Services
HEEACT	Higher Education Evaluation and Accreditation Council of Taiwan
HEI	higher education institution
IREG	International Ranking Expert Group
KMT	Kuomintang (Taiwan)
MOE	Ministry of Education (Taiwan)
NCCU	National Cheng Kung University (Taiwan)
NCKU	National Chengchi University (Taiwan)
NPM	New Public Management
NSC	National Science Council (Taiwan)
NTU	National Taiwan University
OECD	Organisation for Economic Cooperation and Development

PRC	People's Republic of China
PRSPWU	Performance Ranking of Scientific Papers for World Universities
QS	Quacquarelli Symonds
QSWUR	QS World University Rankings
R&D	research and development
RAE	Research Assessment Exercise (United Kingdom)
ROC	Republic of China
SCI	Science Citation Index
SSCI	Social Science Citation Index
THE-QSWUR	Times Higher Education–QS World University Rankings
THEWUR	Times Higher Education's World University Rankings
TNC	transnational corporation
TSSCI	Taiwan Social Science Citation Index
UGC	University Grants Committee (Hong Kong)
UST	University System of Taiwan
WTO	World Trade Organisation
WWII	Second World War

# Chapter 1

## Introduction

Ranking is nothing new in higher education, and it has always been important. In fact, commercial university rankings have existed in the West for a number of years. However, climbing league tables and university rankings has become far more important than before (Frank, 2001; Hazelkorn, 2007a; Lynch, 2006), despite the criticisms that many of these ranking exercises are still far from systemic and scientific (Lynch, 2006). This is because, as explained by Frank and Cook (1995), “the economic reward for elite educational credentials has jumped sharply in recent decades” (p. 5). This statement mainly reflects the impacts of ranking on the decision-making of students, especially that of international students, in their choice of universities. More importantly, recent studies report that the emergence of global rankings has caused different degrees of impact on strategies of higher education institutions (HEIs), behaviours and decisions of various stakeholders within the higher education field and even government policy (Bastedo & Bowman, 2011; Hazelkorn, 2007a, 2007b, 2008, 2009; HEFCE, 2008). This is because global rankings are seen as the progenitor of a reputation race with geopolitical implication in today’s globalised world (Hazelkorn, 2011; Murphy, Peters, & Marginson, 2010).

In East Asia, we have witnessed that many governments in the region take the ranking exercises very seriously and thus their influence is expanding rapidly in both policy making and institutional agenda (Mok, 2007b, 2010b). For many East Asian countries, higher rank in the global leagues not only means making a difference in credentials of HEIs, but also serves their national goal of building world-class university. In various countries of the region, including China, Japan and South Korea, the governments attempt to implement special initiatives for selected universities. These special programmes like China’s 211 and 985 projects, Japan’s Centre of Excellence in the 21st Century (COE21) program and South Korea’s Brain Korea 21 (BK21) program aimed to improve research capacity of selected institutions or research units, thereby facilitating them to achieve world-class status (Ishikawa, 2009; Kim & Nam, 2007; Kim, 2008; Liu, 2007b; Ngok & Guo, 2008; Yonezawa, 2007). In

Malaysia, the government has adopted similar strategies to promote the notion of world-class university. Universiti Sains Malaysia was granted the Accelerated Programme for Excellence (Apex) status with which the university would enjoy high autonomy in finance, personnel, student recruitment, tuition fee and determining the senior management. In return, the university was required to reach the world's top 100 universities by 2020 (MOHE Malaysia, 2008; Mok, 2008b). Though not all these policy initiatives specify their targets as better performance in position taking in global university rankings, obviously moving up the existing league tables is an efficient way to show their achievements.

Similar to the rest of the region, the influence of the rankings on Taiwan's higher education policy and HEIs' agenda is likely to be profound. For instance, the government set out a policy target to develop at least one university as one of the world's top 100 universities and at least 15 key departments or cross-university research centres as the top in Asia by 2009 (MOE, 2010d). Different programmes therefore have been launched to achieve this objective. Yet, the impacts of this reputation race are likely to generate all sorts of unintended consequences and plausibly perverse effects on higher education policy and institutional agenda in Taiwan that are only vaguely perceived at the present time (Cummings, 2006; Deem, Lucas, & Mok, 2009; Deem, Mok, & Lucas, 2008; Song & Tai, 2007).

## **1.1 Statement of the Problem**

For national policy makers and leaders of individual HEIs, the rising quest for world-class excellence and the increasingly prevalent international university rankings are taken as essential elements of the process of globalisation and internationalisation within the higher education field (Marginson & van der Wende, 2007a). This reputation race represents higher education entering "an era of open global competition between nations and between individual HEIs as global actors in their own right", in which "international comparisons are constantly made" (Marginson & van der Wende, 2007b, p. 307), despite the unequal distribution of resources and educational status and the dominance of the English language and institutions from the Anglo-American nations. This illustration of global transformation in higher education specifies international competition in two ways. First, there is a recognition

that top universities in the global era are necessary to transcend the boundaries of nations, and that they have to involve in the global academic community to validate their international stature (Mohrman, Ma, & Baker, 2008). In this sense, if universities wish to pursue excellence in the global age and compete for an internationally recognised status, they seemingly have no alternative but to abandon the locally-focused approach. Second, given the prevalence of global university rankings and their metrics for assessment, stepping up specific criteria used in the influential global league tables, like the Academic Ranking of World Universities (ARWU) and *Times Higher Education's* World University Rankings (THEWUR), becomes a smart way to win in the reputation race on a global scale (Altbach, 2007; Marginson & van der Wende, 2007b).

The emergence of global competition has drawn the academic attention on a plausible positional arms race in higher education that means the financial costs of building and sustaining “world class” excellence can be socially wasteful (Frank, 2004; Hazelkorn, 2007a; Winston, 2001). For example, more effort on research and international recruitment are the logical responses to the global university rankings because they are the measured outputs in the major global rankings (Marginson & van der Wende, 2007a). However, it is obvious that not all HEIs need to be research-intensive and globally active. In addition, given the importance of research in contributing to the international ranking exercises such as the ARWU, the research mission has become the top priority of many institutions. But, this may have a negative impact on the quality of teaching (Leisyte, Enders, & de Boer, 2009; Lewis, 2006). Active participation in the global academic network, which contributes greatly to international reputation marketing, has also sharpened the conflict between the global vision and local dimension on which individual HEIs operate. This is because “involvement in world science means, in general, adherence to established research paradigms and themes” and consequently it seems not practical to “build an infrastructure that permits research on local or regional themes if a university wishes to join the ‘big leagues’” (Altbach, 2007, p. 16). These strategies of pursuing excellence selectively are also adopted by higher education systems through the creation of a differentiated academic system and concentration of funding (Altbach, 2007; Deem et al., 2008). Then, there is an argument that universities are facing difficulties of uncertain role and purpose because of such a globalised and complex environment in which universities are struggling between the processes of

differentiation and dedifferentiation generated by the diversified influences of national policies and academic norms and values (Deem, Hillyard, & Reed, 2007; van Vught, 2008). All these instances have demonstrated that there is an awareness of tension between university rankings and institutional and governmental policies and concerns.

The tension on how to position the university in a globalised and marketised system with its own characteristics has generated many controversies in non-English speaking countries where universities have strong incentives to concentrate their efforts onto producing academic publications in international English-writing outlets, owing to the added weight of research domains in measuring their performance. Nevertheless, in many circumstances, staying away from using indigenous languages may mean losing connections and interactions with the local communities. It is also criticised that many Asian states ignore their local context when they review their education systems and launch reforms along the Western models and experience. These reforms and policy changes are criticised as a sort of policy copying, instead of policy learning and this consequently would create a new “dependency culture” (Deem et al., 2008). In fact, in Taiwan, academics, mainly from arts, humanities and social sciences, have strongly criticised the current evaluation mechanism that overemphasises the importance of publications in English speaking journals, especially those listed in the Science Citation Index (SCI) and Social Science Citation Index (SSCI)<sup>1</sup>, but ignore the contributions of local publications written in Chinese. Chen and Lo (2007) argued that the current evaluation has undermined the morale in the academia. Thus, they call for building an “Asia-centered” evaluation mechanism for the disciplines of humanities and social sciences.

These various tensions and related debates make this study conceptually and empirically important, since the higher education sectors in East Asia and, in particular, in Taiwan have yet to find or consolidate its own way in the global age.

## **1.2 Research Objectives**

This thesis aims to examine how Taiwan’s higher education has been influenced by the ranking phenomenon. This topic was chosen because there is a growing obsession

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<sup>1</sup> SCI and SSCI are citation indices produced by the Institute for Scientific Information (ISI) of Thomson Reuters. These databases show citations counts of scholarly literature and are considered as key measures of recognition and importance in academic field.

with university rankings around the world. However, given the fact that the influence of rankings has only become prevalent in many other parts of the world since the emergence of global rankings in the mid 2000s, it is a relatively neglected topic in the literature in East Asia in general and Taiwan in particular. Therefore, the first objective of this thesis was to present empirical findings on the impacts of university rankings on Taiwan's higher education. Compounded with the factor of globalisation, global university rankings become an intriguing phenomenon by which the higher education landscape has been implicated. The second objective thus was to consider global university rankings as a factor affecting national strategies in higher education and transforming the global landscape of higher education in the context of globalisation and neoliberalisation. Furthermore, recent work has seen rankings as a form of normative force that projects hegemonic and homogenising functions and, therefore, has sought to read and explain the ranking phenomenon theoretically. In light of this, the last objective hence was to provide a conceptual clarification of the growing obsession with rankings and to achieve a better theoretical understanding of the basis of their popularity and their implications for higher education through applying theories from different disciplines. Based on these research objectives, the study addresses the following three research questions:

1. What are the impacts of university rankings on Taiwan's higher education?
2. How does the emergence of rankings influence Taiwan's position in the global higher education landscape?
3. How can these phenomena be theoretically framed?

### **1.3 Theoretical Orientation and Framework**

This thesis draws on a number of analytical perspectives to provide conceptual standpoints for its theoretical approach and framework. Among the many relevant theories, I paid particular attention to the concepts of convergence and homogenisation, because international competition has created a new institutional environment, in which higher education systems are developing toward unified and differentiated structure. The emergence and prevalence of ranking systems then is seen as an important element strengthening the competitive pressure and process as well as intensifying the systemic and institutional transformation (Altbach & Balán,

2007; Stensaker & Kehm, 2009b).

The ideas of convergence and homogenisation, in a broad sense, lie on the concept of time-space compression proposed in the globalisation theory (Giddens, 1990). It suggests that the use of information technology and intensified personnel exchange enable international circulation of research results and worldwide contributions to the same publication venues. As a result, a standardisation of sciences and scholarships, in the aspects of hardware (including scientific equipment, laboratories and infrastructures) and software (including definitions, methodologies, paradigms and themes of research) has transpired (Altbach, 2007; Sidhu, 2006). Given the eagerness to participate in the international academic network, international standards and the world-class excellence which projects the highest standard in the global academic community have been something inevitably to be accepted by the academic circles, even though we still have not reached a concrete answer to the basic question about what a world-class university means, particularly within a local context.

In regard to the study of higher education, the process of convergence and homogenisation mainly refers to a global phenomenon, in which diversity within a system and between systems has been undermined owing to the rise of the audit society and opened global higher education market (Marginson & van der Wende, 2007a; Sidhu, 2006; Stensaker & Kehm, 2009b). Given the expansion of higher education in many countries in terms of the number of students and HEIs, there has been an increased demand for information resources to facilitate the purchase by student-consumers. In turn, both university's customers and managers seek a widely accepted standard because it means efficiency, calculability, predictability and control, thereby providing quality guarantee (Ritzer, 2002). This is a key factor leading to the development of an auditing culture in higher education that is visualised through a spread of quality assurance schemes and accountability mechanisms.

Globalisation and the rise of an auditing culture have developed an environment in which university rankings can be seen as a mechanism of facilitating international competition and upholding accountability. It functions as a "fashion arena" that aggregates institutional performance to create the identity and position of HEIs in a hierarchical setting (Coates, 2007; Stensaker & Kehm, 2009a). For some HEIs, the reputation and prestige brought by the exclusivity in these hierarchical classification systems are important, in terms of marketing and fulfilling the needs of some students



(Kirp, 2003; Longden & Yorke, 2009); and achieving the status of a world-class university (Deem et al., 2009). These discussions provide a theoretical basis on which we have witnessed the behaviours of HEIs and higher education stakeholders have been altered. In this regard, this study presents an empirical study of Taiwan's higher education framed by the notions of world-class university and performativity culture and, therefore, responds to its first and second research objectives.

In regard to the third research question, it is recognised that the nature of university rankings can be further elaborated and conceptualised with reference to a number of theories. At institutional and individual levels, several authors argued that university rankings can be seen as a form of normative power in order to explain the constraints on decoupling from the homogenising functions of rankings. For example, Sauder and Espeland (2009) noted that Foucault's insights about disciplinary power sufficiently explain the changing organisational behaviours of HEIs and individual responses of a faculty member under the influences of university rankings. They noted that rankings are a type of disciplinary practice that is "capillary", "continuous" and "diffuse" (p. 69; also see Foucault, 1977, 1980). They therefore argued that the environmental pressure generated by rankings is less "decouple-able" (p. 65). This analytical approach to university rankings leads us to rethink the competition and reputation race initiated by the performativity culture and hierarchical classification. Indeed, in light of Bourdieu's (1984, 1988, 1993) arguments about "game playing", Deem and her colleagues pointed out that competition for and accumulation of academic capital as well as prestige and status are endemic to academic circles. And, university rankings provide a way of specifying the field of game playing (Deem et al., 2009). These studies suggest that we should pay more attention to the connection between university rankings and power when exploring how external pressures generated by league tables are internalised by HEIs and academics.

At the international level, I recognised the relevance of the world-systems theories and post-colonial analysis to the present discussion. While the "centre-periphery" framework initiated in the world-system thesis highlights the unequal pattern of the global higher education landscape (Altbach, 1998; Altbach & Kelly, 1984), the post-colonial thoughts show how the expansion and development of higher education in developing countries are not capable of changing the inequality between the developed and developing parts of the world in knowledge construction (Tikly, 2001, 2004). Then, university rankings are largely considered as mechanisms

reconfirming the dominance and hegemonies of Western paradigms in higher education (Deem et al., 2008; Ishikawa, 2009; UNESCO, 2010). However, several recent studies raised my concern about the roles and functions of rankings in the process of reshaping the global landscape of higher education. For instance, Marginson (2009b) proposed an antinomy of the knowledge economy, in which university rankings facilitate the patterns of openness and closeness in the global higher education space simultaneously. On this basis, I have argued that “the anti-colonial perspective on global higher education is useful in highlighting the dominance of the Western paradigm, but is inadequate for explaining the self-determination of peripheral nations” (Lo, 2011, p. 213). Therefore, in light of the concept of soft power developed by Nye (2004), I proposed the soft power perspective as an alternative way to deconstruct the dominance of the Western paradigm. These studies point to an angle from which university rankings can be conceptualised as the mechanism of agenda setting in global higher education, thereby explaining “how global hegemonies are manifested in higher education agendas” (Lo, 2011, p. 209).

In Chapter 2, elements of these theoretical perspectives will be elaborated more fully and synthesised to provide an analytical framework.

## **1.4 Methodology**

This thesis adopted a qualitative case study approach to collect and analyse data. It used various methods (namely literature review, documentary analysis and interview) for data collection. In particular, the research methods used can be divided into two main categories.

The first refers to literature review and documentary analysis. In this dissertation, documents are used as a main information source for understanding the policy responses to the reputation race in higher education made by the Taiwanese government and perspectives held by other relevant organisations and individuals on the issues. Different types of literature and documents, including books, journal articles, newspapers, as well as documents and websites of government departments, HEIs and relevant agencies were reviewed to collect the data.

The second consists of 22 semi-structured interviews with academics from five

universities in different parts of Taiwan plus one interview with an affiliated member of the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT). Non-probability, purposive sampling was employed to recruit interviewees from HEIs which are categorised as three tiers based on the differentiated higher education system in Taiwan (Lo, 2009). Interviewing people from the Ministry of Education (MOE) and National Science Council (NSC) was originally planned for understanding the official views of the Taiwanese government. However, my requests for interview with people from these two agencies were denied. While this has been taken as one of the limitations of this study, I managed to interview the HEEACT affiliated member as a compromise. Given the fact that HEEACT is a statutory body commissioned by the MOE to conduct higher education evaluation and accreditation, the views expressed by this HEEACT affiliated member somewhat reflect the Taiwanese authorities' view on the issues. With the consent of the interviewees, interviews were recorded and notes were taken. The audio records were listened to and transcribed carefully, and then were anonymised. There was anonymisation of interviewees and their affiliations.

In regard to data analysis, the data collected from documentary analysis and interviews were sorted for themes based on a graphic assembly plan. The sorting scheme derived from broad themes of the four dimensions set in the analytical frameworks. The analysis focused on understanding the meaning, context and variations of viewpoints of interviewees and related agencies in order to address general trends related to the effects of university rankings.

A more detailed methodology will be given in Chapter 4.

## **1.5 Organisation of the Thesis**

This thesis consists of nine chapters. Chapter 1 is an introductory chapter that delineates rationales for and research aims and questions of this study. Chapter 2 defines university rankings and reviews some concepts and theories relevant to the study. On this basis, it outlines a four-dimension model of rankings that serves as a framework for the analysis of the ranking phenomenon. Chapter 3 presents an analysis of the recent history of Taiwan higher education system and related socio-political developments since the late 1980s. Chapter 4 then states the methodology

and the research methods used in this study. The heart of the thesis comes in Chapters 5–8. Chapter 5 seeks to examine how the emergence of university rankings has impacted on Taiwan's higher education. It mainly focuses on how the prevalence of rankings is related to the changing behaviours of stakeholders in the Taiwanese higher education sector. Chapter 6 is concerned with the relevance of rankings to the changing global landscape of higher education. By looking at Taiwan's place and role in the global higher education landscape, it describes the functions of rankings as an indicator of higher education quality and research capacity in an international setting. Chapter 7 tries to provide a theoretical description of how and why rankings may be a powerful driving force transforming institutional and individual behaviours and perceptions. In light of postcolonial discourse, Chapter 8 argues that the implications of university rankings can possibly bring both positive and negative consequences for the global higher education in terms of quality and diversity. Finally, Chapter 9 concludes the thesis by providing an overall assessment of the implications of rankings for Taiwan's higher education. It reflects on the theoretical implications of ranking phenomenon, and attempts to make recommendations for future research.

## **Chapter 2**

### **Theorising University Rankings**

#### **2.1 Introduction**

This chapter engages with literature from different disciplines to provide the conceptual raw materials for the general theoretical approach to analysing university rankings. It consists of four main sections. The first section synthesises a number of concepts and theories, including globalisation, marketisation, managerialisation, network-governance, world-systems theory and post-colonialism, to examine the complex world of higher education in the globalised and marketised era. The second section then delineates the definitions and characteristics of university rankings. Based on these theoretical elements, the third section illustrates four dimensions of university rankings. Each of these dimensions is drawn from parts of the complexity of higher education. These conceptual elements integrate and repack the many interrelated developments in higher education and, therefore, construct a framework of global competition at individual, institutional and systemic levels for understanding university rankings. In light of this four-dimensional model, the fourth section develops an analytical framework for this study.

#### **2.2 Contextual Theories**

This initial section aims to present a picture of the changing environment in which global university rankings have emerged. Five relevant theses of higher education are identified to form the theoretical context within which a classification of the features and purposes of rankings can be developed. The first thesis is the global trends towards cross-border activities in higher education. While the concepts of globalisation and internationalisation are commonly used in literature nowadays to conceptualise this type of activity, here I use the term transnationality to caption the many relevant phenomena and concepts, given that the tendencies incorporate

phenomena in international and supranational dimensions. The second thesis is about the effects of neoliberalism on higher education that reflects on how the introduction of market elements has influenced higher education. The third is to demonstrate the changing governance structures at both systemic and institutional levels in higher education. The fourth thesis is to look at how the relationship between various stakeholders of higher education has been changed under the influence of globalisation and marketisation. I call this discussion of the new relation the ecology of higher education.<sup>2</sup> The fifth thesis is to delineate the global landscape of higher education in light of the world-system theory and post-colonial analysis, thereby illustrating the geography of higher education in the contemporary world.

### **2.2.1 Transnationality in Higher Education**

Universities have become much more active in involving international activities during the past two decades. These activities include the increase of student and staff mobility, the provision of cross-border higher education and the emphasis on international perspectives on teaching and research (Altbach & Knight, 2007; Denman, 2002; Zha, 2003). Given the common awareness of the rise of global connectivity, the concept of globalisation has been widely used in literature on higher education in recent years. According to Altbach (2004b), globalisation, for higher education, means “the broad economic, technological, and scientific trends that directly affect higher education and are largely inevitable” (p. 5). Indeed, globalisation represents integration on a worldwide scale. Therefore, in this study, globalisation is defined as the process of convergence and integration over national borders (Carnoy, 1999; Dolby & Rahman, 2008; Guri-Rosenblit, Sebková, & Teichler, 2007).

Drawing on the concept of globalisation, many commentators have sought to examine the influences of the growing globalism on higher education. One of the major global educational discourses concerning globalisation and higher education is about the knowledge economy and technology. On the one hand, in this discourse about global economy, knowledge is seen as a key factor facilitating economic growth. As the World Bank (2003) put it:

A knowledge-based economy relies primarily on the use of ideas rather than

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<sup>2</sup> Ashby used this terminology to describe the relation between the university and the state with special attention to academic freedom and autonomy (see Ashby, 1966).

physical abilities and on the application of technology... The global knowledge economy is transforming the demands of the labour market throughout the world. It is also placing new demands on citizens, who need more skills and knowledge to be able to function in their day-to-day lives. Equipping people to deal with these demands requires a new model of education and training (p. xvii).

This quote shows that higher education plays a role to nurture human resources, and to innovate and apply new technologies in economic activities in the global era (Marginson & van der Wende, 2007a). On the other hand, the use of information technologies makes higher education more accessible to students, as technological innovations have diversified the forms of teaching and learning through new types of pedagogy (Stromquist, 2002). This closer connection between economic development and higher education has led to the call for lifelong learning and more active private participation in education provision across the world (Spring, 2008).

Another focus on globalisation and higher education is the emerging role of supranational institutions in steering the growth strategy of individual countries (Castells, 2000b). While the educational programmes run by the World Bank and Organisation for Economic Cooperation and Development (OECD) are often used as evidence to support the existence of the West-dominance in the post-colonial period (Spring, 2008; Tikly, 2001, 2004), the General Agreement on Trade in Services (GATS), a treaty of the World Trade Organisation (WTO), is seen as an important step towards a closer link between trade and higher education because education is among the services covered by the GATS. A lot of literature places a heavy emphasis on the role of GATS in liberalising the global market in educational services (for example Currie & Newson, 1998; Henry, Lingard, Rizvi, & Taylor, 2001; Hill, 2003; Knight, 2002a, 2002b; Rikowski, 2003; St. George, 2006), because the agreement provides an environment in which transnational education becomes more common via various channels, like cross-border supply and consumption abroad (OECD, 2004). This newly emerging overseas demand and supply consequently has intensified competition between higher education systems and institutions (Healey, 2008; UNESCO, 2000). However, the influences of the GATS should not be overstated, as many forms of transnational higher education have occurred outside the WTO/GATS framework, given the fact that nation-states remain strong in their control over higher

education systems (Green, 2007).<sup>3</sup> But, the discussion about the supranational institutions and higher education is still important in terms of highlighting the emergence of a global market in higher education. An important aspect of the development of transnational education is neoliberalism, which will be discussed in detail in the next section.

Turning to a governance perspective on globalisation and higher education, transnationality leads to a network form of governance because globality and locality are inseparable in social practice. Thus, the emergence of supranational entities and the growth of subnational entities have formed the organising nodes of a networked world and hence have nurtured the notion of self-governance (Jayasuriya, 2005; Rhodes, 1996). As a result, “the state no longer primarily initiates action in, but rather reacts to, worldwide economic forces... the state increasingly facilitates this process acting as its agent” (Mittelman, 1996, p. 7). This conception of networks of power illustrates a networked framework, within which national, subnational and institutional entities are able to compete and cooperate with others without concerning the hierarchical structures of power (Castells, 2000b).

These conceptual discussions have implicated HEIs as nodes in the networked world, and have shown that competition in higher education has gone beyond national borders. This is an issue we will return to later in this chapter. Nevertheless, this conception has illustrated a complex and more interconnected globe where universities are facing competition from both local and overseas counterparts and are assigned new missions of supporting the growth of the economy. While these new challenges and missions entail cooperation and coordination beyond national borders, they represent the features of transnationality in higher education.

### **2.2.2 Neoliberalism in Higher Education**

The discussion about the link between international trade and higher education in the previous section somewhat has reflected that higher education nowadays is seen more as a commodity than as a public good. As said, economic globalisation that emphasises neoliberalism and advocates trade liberalisation in education is an

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<sup>3</sup> There are queries about the transformative potential of WTO/GATS within national systems because, as analysed by Marginson and van der Wende (2007a), many cross-border activities in higher education are largely non commercial in nature, while GATS is concerned with commercial cross-border activities only. Also, individual countries can control the degree to which they want to open up their higher education market to foreign providers.



important reason explaining such a development. Because the pursuit of global free markets that involves “the abolition of tariffs or subsidies, or any form of state-imposed protection or support, as well as the maintenance of floating exchange rates and ‘open’ economies” (Olssen & Peters, 2005, p. 315) is substantially connected to the discourse on globalisation through the emphasis on competition, though neoliberalism arose essentially in the 1980s, prior to communicative globalisation and the great expansion of cross-border activities. In fact, “in many cases, issues of higher education reform appear in the context of aligning limited capacity with expanding social needs, while creating or retaining quality” (Hawkins, 2008, p. 532). Nevertheless, the connection between neoliberalism and internationalism in higher education is grounded on a condition in which “low transportation and communication costs, the increasing migration of people, and the rise of private funding and provision of higher education further facilitate the emerging international marketplace for higher education and academic research services” (van der Wende, 2007, p. 277). As a consequence, many higher education systems need to face a dual challenge. On the one hand, in response to fierce competition for students and prestigious academics from abroad, “institutions of considerable age and distinction are... demonstrating their ‘competitiveness’ by exhibiting ‘world class’ attributes—a not very disguised code for developing competitive international research capacities and attracting the best students” (Hawkins, 2008, p. 532). On the other, to meet expanding social needs in local communities, “institutions of lesser status are expanding rapidly and new institutions are coming into existence” (p. 532). While the former aspect of the challenge specifically rationalises the trends towards internationalisation in higher education, the latter explains the move towards a diversified mode of providing and funding through the participation of private or non-state players in higher education.

Importantly, as competition has become the driving force of many social institutions along with global and national economies (Apple, 2000; Stromquist, 2002), neoliberalism not only affects instrumental adjustments, like cost shifting and sharing, but fundamentally alters governing philosophy in policymaking and service delivery. Higher education has been impacted by these developments, and therefore has become more of a mixed good (Olssen & Peters, 2005). The meaning embedded in this phenomenon is that of reinventing the conventional notion of education as a public good. As Neubauer (2008) said:

Contemporary neo-liberal theory has reinvested public goods with the character of divisibility, seeking often to charge users of such goods in direct proportion to the benefits they individually receive. Charges may be levied in either the public or private sectors (p. 130).

In terms of implications for public policy, this remaps public/private distinctions in contemporary states. Despite the existence of differences between the East and the West in terms of political, social and cultural history, in many cases the public and private sectors have been blurred (Giroux, 2002; Hawkins, 2008; Neubauer, 2008; Stewart, 2005).

Furthermore, the adoption of market principles and mechanisms and the participation of the private/non-state sectors in higher education means that universities now are required to reduce their financial dependence on the state and become more financially proactive (Bok, 2003; Currie, DeAngelis, de Boer, Huisman, & Lacotte, 2002; Häyrynen-Alesto & Peltola, 2006; Liefner, 2003; Lynch, 2006). Universities thus have diversified their income sources across the state and the non-state sectors to secure their revenue. Non-traditional financial sources like capital endowment, commercialisation of teaching, research and services, loans at privileged interest rates and grants from tycoon and charity organisations become more and more common and important. This diversified financing base has altered the traditional structure of universities. Peripheral units that promote outreach activities such as industrial liaison, technology transfer, consultancy and continuing education have become basic units parallel to disciplinary departments (Clark, 2002). These units act as mediating institutions that link the university to outside organisations. Moreover, the enhanced peripheral units tend to integrate with the disciplinary departments in daily operations. This causes the distinction between disciplinary academic and peripheral units to become blurred.

Some commentators see these changes as a form of corruption of academic values (Bok, 2003; Giroux, 2002; Williams, 2003). However, for me, these reforms in university financing and structure mean a change of the relationship among university, business and industry, and therefore have formed a new front for accountability. Traditionally, in many higher education systems, universities need to be accountable to government through different evaluation. But, now universities are also expected to

be responsible for fulfilling different expectations from the community in response to the request for industry-centered knowledge. Consequently, universities need to accommodate different types of accountabilities to establish and maintain connections with other social actors, and hence have to move towards the new “university-academic-productive sector relations” (Sutz, 1997) and to adopt entrepreneurial culture through using the specific notions of “corporate academic convergence” (Currie & Vidovich, 1998), “market-model university” (Engell & Dangerfield, 1998), “entrepreneurial universities” (Marginson, 2000), “campus inc” (White with Hauck 2000) and “education plc” (Ball, 2007). In sum, academic values are now encircled by managerial and budgetary interests (Clark, 2002).

### **2.2.3 Heterarchical Governance in Higher Education**

Under the influences of neoliberalism, today’s higher education policy and university governance need to be complementary to public and private. For Bessusi (2006), the central theme of the changes is the engagement with a multiplicity of actors in public policy. She said:

Governing through the negotiated interactions of a multiplicity of actors from public, semi-public and private sectors has become a recognised form of making and implementing public policies in western states. It is a response to the failure of government and markets alike to provide an efficient and effective system of regulation and welfare services (p. 12).

This concept of policy networks is closely related to neoliberalism and the associated discourse of New Public Management (NPM) or managerialism. For neoliberals, good public governance is to shift the public sector towards “less government” (or less rowing) but “more governance” (or more steering) through encouraging competition and markets, privatisation of public enterprises, reducing over-staffing of the civil service, introducing budgetary discipline, decentralisation of administration and making use of non-government organisations (Osborne & Gaebler, 1992; Williams & Young, 1994). Accordingly, this managerialisation or “destatisation” forms a way of “redrawing the public-private divide, reallocating tasks, and rearticulating the relationship between organisations and tasks across this divide” (Jessop, 2002, p. 199).

These new governance theories have brought the concept of co-governance into the public policy process, thereby advocating the mobilisation of non-state sources and actors to be engaged in the provision and funding of public services (Kooiman, 2000, pp. 148-151). These changes on the one hand can generate additional resources for the state to finance and provide social services. They can be seen as a “new state capitalism” that transforms the role of the state as commodifying agent (Cerny, 1990). On the other hand, these neoliberal reforms can be seen as a process of internalising globalisation in which governments use the trendy global practices to reshape their domestic economic constitution in order to develop their own policy agenda and fulfil their national goals (Cerny, Menz, & Soederberg, 2005; Scholte, 2005).

At a conceptual level of analysis, the changing governance in globalisation discourse represents a shift by which the state has changed its governance strategies from “positive coordination” to “negative coordination” (Jayasuriya, 2001; Scharpf, 1994). Different to the destatisation thesis, the shift in coordination is more like a “refashioning of the modalities of governance” through which the role of state is changed “to provide the institutional foundations for the autonomy of regulatory institutions and to constitute procedures... for the functioning of these institutions” (Jayasuriya, 2001, p. 110) and has prevented the corporatist state from being overburdened by social and economic policy commitments.

Meanwhile, there is a parallel process of formulating regulatory architecture based on the interlocking relationship between the public and private sectors. In light of this concept of co-governance discussed earlier, this new architecture of regulation represents the diffusion of public power to private organisation by creating new private and quasi-private agents that located outside the formal state apparatus. The “public in private” form of governance is viewed as an implantation of public power in non-governmental organisations (Jayasuriya, 2005). This new governing pattern seems not a “hollowing-out of the state” (Rhodes, 2000) but a form of “coordination and self governance”, “networks and partnership management” (Kooiman, 2000), “a shift from government to governance” (Mok, 2007a), or “a shift from hierarchy to heterarchy” (Ball, 2009b).

Among these relevant concepts, Ball’s idea of heterarchical governance is especially useful to explain the complexity of higher education governance in the globally interconnected world. The concept helps us understand how different elements of the policy process can cooperate or compete while success criteria can be

optimised individually. According to Ball, this heterarchical relationship “replaces bureaucratic and administrative structures and relationship with a system of organisation replete with overlap, multiplicity, mixed ascendancy, and/or divergent-but-coexistent patterns of relation” (Ball, 2009a, p, 100). Concerning its function of governing disparate sites across the public/private distinctions, there are new policy communities that bring “new kinds of actors into the policy process, validate new policy discourses” and enable “new forms of policy influence and enactment, and in some respects disable or disenfranchise or circumvent some of the established policy actors and agencies” (Ball, 2008, p. 748). More importantly, heterarchies are not limited by national borders but are indicative of a new architecture of regulation that functions within and beyond national borders simultaneously.

To link these policy networks with the transnationality in higher education, it is recognised that they provide a foundation for developing new governing structure to connect global/local, in addition to facilitating the blur of public/private distinctions. In line with heterarchy, Marginson and Rhoades (2002) proposed that the interactions between local, national, and global layers do not need to work in a linear pattern but in a more complex way by which universities are able to move into the international niches and to remain serving local communities simultaneously. Based on this, Jones (2008) believed that that academic units within an institution, institutions and system-level authorities can be seen as various autonomous cells and can operate within a complex inter-relationship network and at the local, national and/or global dimensions at the same time.<sup>4</sup>

These arguments sufficiently show the impacts of transnationalisation of higher education on the governing structure at both national and institutional levels. It is indicative of a networked form of structural framework in which universities and/or units of universities run as self-determining agencies together with institutions outside the higher education sector on the basis of an interactive behavioural pattern.

#### **2.2.4 The Ecology of Higher Education**

Though networks stress self-governing and self-determining behaviours, they “also impose a heteronomous order that requires continual responsiveness to the agendas of

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<sup>4</sup> Marginson and Rhoades (2002) call their model of international network a “glonacal agency heuristic”. And, Jones (2008) developed a conceptual framework called the “global higher education matrix” to provide a conceptual foundation for how a local university can be a global institution.

other” (Marginson, 2009b, p. 16). Regarding the relationship between governments (and/or related statutory bodies), universities and students, the order largely refers to accountability.

Accountability is considered an important component and parcel of NPM because it ties the many parties together in the network system that stress autonomy and self-governance through performativity (Deem et al., 2007; Huisman, 2007; Salmi, 2007). According to Olssen and Peters (2005), the approach of performativity is to replace the old centralised regulatory system by “a new system of public administration which introduces such concepts as clarification of purpose, role clarification, task specification, reliable reporting procedures and the freedom to manage” with an emphasis on contracts (pp. 322-323). As Olssen and Peters explained, while parties in higher education have some autonomy in performing their specified role, they are required to be accountable for their performance on the basis of agreement. And, while success in fulfilling the assigned responsibilities would bring rewards, failure would bring punishing consequences (Olssen & Peters, 2005, p. 323). This means relationships in higher education are driven by contractualism.

The direct consequence of performativity in higher education is that universities need to rethink their relationship with the state and students. In the relationship between the higher education sector and the state, performativity introduces a culture and a mode of regulation, on the basis of which:

The performance of individual subjects or organisations serves as measures of productivity or output, or displays of ‘quality’, or ‘moments’ of promotion or inspection... It allows the state to insert itself deep into the culture, practices and subjectivities of public sector organisations and their workers, without appearing to do so. It changes that which it ‘indicates’; it changes meaning; it delivers re-design and ensures ‘alignment’ (Ball, 2007, pp. 27-28).

As a result, higher education, as a form of production, is standardised to make “outputs”, “levels of performance” and “forms of quality” more calculable and comparable (Ball, 2007, p. 28).

The introduction of a performance-based funding system has further encouraged the performativity culture in higher education. Indeed, academia has now entered an era of performance-funding regime that is considered as a response to managerialism

and as a way to pursue quality and cost-effectiveness (Sörlin, 2007). A variety of competitive or performance-based allocation programmes thus have been introduced in countries in Europe (Liefner, 2003; Lucas, 2006; Weiler, 2000), Asia (Chan & Lo, 2008; Mok, 2010b) and America (Jin & Whalley, 2007; Sörlin, 2007). As a result, institutions differ and funding is heavily concentrated on prominent universities. In many cases, they are research-intensive universities.

With regard to accountability to students, it is strongly based on market systems through which consumers can reward and punish the service providers in accordance with the achievement of preset-targets and imposed objectives (Olssen & Peters, 2005). This is closely related to the neoliberal reforms that have commercialised higher education, and, as argued by Giroux (2002), have transformed the teacher-student relationship into an economic relation. As a consequence, students have taken on more the attitude of customers. They view themselves as customers who pay for a service and treat higher education as a commodity to be bought (Delanty, 2002; Newman, Couturier, & Scurry, 2004).

As observed by Frank, the market-driven mechanism and customer-oriented behaviours have brought the increase of transparency in the US's higher education sector. However, the information provided to students is often enclosed with the objectives of attracting students and brand-building. To further complicate the story, students have diverse preferences over different aspects of the bundle. And universities are expected to be responsive to the priorities of students in such a multi-dimensional market. This has caused a "positional arms race" that forces universities to invest a large amount of expenditure on specific ingredients of elite educational status so as to show that they are better than other institutions in some areas and to develop strong reputation in the market for students (Frank, 2001, 2004; also see Kirp, 2003).

Given the emergence of the global higher education market, the "positional arms race" has been placed on an international scale. As an impact on the academic life of individuals, the global competition is translated into pressure on academics to concentrate their efforts on research and to publish in international English-writing outlets because these activities can generate more impact at the international level; thereby enhancing the international standing of the academics and their affiliations (Mohrman et al., 2008). This is particularly true for the situation in non-English speaking countries. Meanwhile, the pursuit of prestige and reputation has

strengthened the rationales for advocating the performativity culture and the associated differentiation in higher education through government policies at the systemic level. It is suggested that these pressures on individuals and higher education systems are essentially based on the global landscape of higher education that will be examined in the next section.

### **2.2.5 The Geography of Higher Education**

Two theoretical perspectives, namely the world-systems theory and post-colonial analysis, are useful to map the global landscape of higher education. While the former highlights the existence of two unequal zones in the integrated globe, the latter sees globalisation or the Western paradigm as an imposing force of particular agendas on the global society (Spring, 2008). In educational research, these two theories are particularly useful to explain how higher education systems and HEIs in centres and peripheries are stratified in accordance with their access to academic resources; and how convergence and divergence are produced simultaneously to respond to the global forces that are based on hegemonic force of the centres over the peripheries (Arnone, 1980). Altbach (1987) identified five factors constructing this “centre-periphery” framework, which I have adapted somewhat.

First, it is argued that the establishment of modern universities is based on the Western tradition but has little or even nothing to do with the intellectual or educational traditions of the developing countries. The role of developing countries therefore is mainly as a follower in the development of the university model. Indeed, as pointed out by Castells (1994), the specificity of the university in the developing world is rooted in its colonial period. Thus, many former colonies to a large extent retain the characters of the colonial foundations of the university system in their post-independence period, even though universities in these countries are assigned to play the role of ideological apparatuses in order to react against cultural colonialism.

The second factor draws on the substantial dominance of the English language. This has caused non-English speaking scholars and their research and contributions to be less visible, and with significant delays if any attention of the mainstream academic community is drawn. Meanwhile, academics from English-speaking nations or from where English is widely used enjoy a privileged status vis-à-vis their non-English-speaking peers, in the academic labour market and in terms of publishing and presenting research output (Welch, 2002). In addition, as English is the premier



language of business and other professions, students usually want to pursue degrees from English-speaking systems rather than from non English-speaking ones. Some non English-speaking countries thus have decided to adopt English as their teaching language, especially in higher education (Hatakenaka, 2004). This causes the spread of English as the medium of instruction in non English-speaking countries.

The third factor is that there is an uneven allocation of research capacity among different higher education systems. This is because the industrialised nations are the major producers of knowledge and the developing countries are basically consumers. For instance, the US and major European nations accounted for about 63 percent of world research and development (R&D) in the period of 1993-2003 and employed about 66 percent of full-time equivalent researchers in the world in the period of 1995-2002 (Galama & Hosek, 2008, pp. 21-25). The point of view here is that the resource intensive nature of R&D forces low-income countries to apply research done in developed nations, instead of conducting their own research. As a consequence, in many cases, these research imports from abroad are less relevant to the indigenous context.

Fourth, many major means of communication of knowledge (such as scholarly journals, publishers, bibliographies and libraries) are based in Western countries. Academics hence heavily rely on the academic networks based in the industrialised world. For example, the US and major European nations were the home of 35 percent and 37 percent of the volume of science and technology publications respectively over 1997 to 2001, while 63 percent of the highly cited publications were based in the US in the same period (Galama & Hosek, 2008, pp. 31-35).

The fifth factor is about the brain drain that many developing countries are facing. Though there are a significant number of students from poorer parts of the world studying outside their home countries, many of them do not return home after completing their studies. More specifically, the US is a magnet for talented doctoral students and an overwhelming brain-gainer. According to OECD statistics, the US received the most with 20 percent of all foreign students worldwide in 2006 and hosted the largest foreign doctoral population in 2001 with about 79,000 students from abroad (OECD, 2007, 2008). Meanwhile, their propensity to stay grew. From 1987 to 2001, the stay rate for foreign doctoral graduates rose from 49 percent to 71 percent (cited in Marginson & van der Wende, 2007a, p. 23). This has led to a concentration of intellectual human capital in the industrialised nations and in the US

in particular, whereas many developing countries face a net loss of human capital.

This “centre-periphery” thesis suggests that there is a Western hegemony, which is founded on the dominance of English, the distinguished elite status of their central institutions (e.g. Harvard and Cambridge), their large population of foreign students, and Pax Americana and Pax Britannica heritage.<sup>5</sup> This reinterprets globalisation as an Anglo-American process (Altbach, 2007; Marginson & van der Wende, 2007a). In response to the effects of such a hegemonic global power, different countries and regions have made attempts to raise and improve the status and visibility of their higher education sectors so as to develop a more balanced and equal academic environment globally. The European Union (EU) has imposed the Lisbon strategy and the Bologna process to improve the quality of research undertaken in European universities and to unify their higher education systems respectively. At the same time, there is a regional trend of building world-class universities that is associated with role differentiation and fund concentration in Asia. Individual universities are assigned to compete for a more prestigious and visible position in the worldwide landscape of higher education (Deem et al., 2008). These developments herald a global competition that drives policy practices of different countries to move toward convergence. Examples are the rise of performativity and related measures that exist in various higher education systems but project a similar image of excellence discussed earlier. This draws concerns about re-colonisation and neo-colonialism in forms of advocating policy copying and nurturing dependency culture in academia, especially in former colonies (Altbach, 1987; Deem et al., 2008; Tikly, 2001).

Up to this point, this chapter has examined the dynamics of higher education in the globalised and marketised setting. These dynamics are considered as essential components, with which university rankings, especially the global ones, have been developed as an important tool in connecting terrains of knowledge production. The following sections therefore turn to deconstruct university rankings on the basis of what has been discussed.

## **2.3 Definitions and Characteristics of University Rankings**

There are different claims about the origin of university rankings. Usher and Savino

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<sup>5</sup> Altbach (1987) used the terms “dependency” and “neo-colonialism” to describe these inequalities.

(2006) in their recent survey of university rankings traced the origin to the comparison by Morse at the *US News and World Report* in 1981, while Salmi and Saroyan (2007) reported that the first media-initiated comparison of HEIs was the one by Chesly Manly of the *Chicago Tribune* in 1957. However, Stuart (1995) noted that *A Study of the Graduate Schools of America* published by Raymond Hughes in 1925 was the first college rankings based on a school's reputation among others in the field and university rankings initiated by academic and educational organisations actually can be traced to the 1870s.<sup>6</sup>

No matter when the first ranking occurred, university rankings seem to bear a clear meaning. They aim "to grade HEIs according to various indicators or metrics" (Hazelkorn, 2007b, p. 83). In this regard, they are "lists of certain groupings of institutions... comparatively ranked according to a common set of indicators in descending order" (Usher & Savino, 2006, p. 5). Similarly, Roberts and Thompson (2007) defined university ranking as "a published set of quantitative data designed to present comparative evidence regarding the quality and/or performance of universities" (p. 10). At the outset, parallel to other evaluation approaches like accreditation, surveys, self-studies, alumni studies, and evaluation of student achievement and opinion, rankings were carried out with the objective of informing higher education scholars and professionals, and government officials (Salmi & Saroyan, 2007). Nowadays rankings are viewed as an important consumer information tool (Hazelkorn, 2008). To underline the function of rating, Usher and Savino (2006) noted that "university rankings are usually presented in the format of a 'league table', much as sports teams in a single league are listed from best to worst according to the number of wins and losses they have achieved" (p. 5). Truly, ranking in the format of a league table is an effective way to demonstrate win/loss in order to attract widespread public attention, like what happens in football leagues (Tight, 2000).

Concerning the scope of comparison, university rankings usually compare HEIs within a single national jurisdiction. The *US News and World Report's America's Best Colleges* in the US and the *Times Good University Guide* in the UK for example are prominent instances of national league tables. There are some international rankings focusing on professional schools and programmes, such as those published in the

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<sup>6</sup> Webster (1986) reports that the article written by the noted psychologist William Cattell in 1910 ranking the quality of academic programs was the first effort to rate and rank HEIs.

*Financial Times*, the *Economist*, the *Wall Street Journal*, and *Business Week* as well as Eduniversal Worldwide Business Schools Ranking (Sadlak, 2010). Nevertheless, we have witnessed worldwide university rankings becoming more and more common and important. Apart from the earlier mentioned ARWU and THEWUR, well-known global rankings include *Webometrics Ranking of World Universities* by the Cybermetrics Lab at the Consejo Superior de Investigaciones Científicas (CSIC) in Madrid; *Leiden World Ranking* published by the Centre for Science and Technology Studies at Leiden University; *SCImago Institutions Rankings* published by the SCImago Research Groups in Madrid and *Performance Ranking of Scientific Papers for World Universities* (PRSPWU) published by the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT). Today, there are over 50 national ranking systems and eight global rankings of varying significance (Hazelkorn, 2011; Usher & Medow, 2009; Usher & Savino, 2006). Among them, the ARWU and THEWUR are seen as the “brand leaders” of global university rankings and, therefore, were selected by many commentators to examine the impacts of global rankings on higher education in recent studies of university rankings (Da, 2007; Hazelkorn, 2007b, 2008; HEFCE, 2008; IHEP, 2009; Marginson, 2007a; Roberts & Thompson, 2007; Salmi & Saroyan, 2007; Tai, 2007; Turner, 2005; Williams & Van Dyke, 2008 for example). Hence, it is worth elaborating on how these two principal ranking systems operate.

The ARWU was the first comprehensive set of global university rankings and was launched by the Center for World-Class Universities and the Institute of Higher Education of Shanghai Jiao Tong University, China, in 2003. Since 2009, it has been published by ShanghaiRanking Consultancy, a fully independent organization (ShanghaiRanking Consultancy, 2010). The ARWU is not a holistic university ranking but focuses on research performance of HEIs; because, as argued by the ARWU group, broadly available and internationally comparable data of measurable research performance is the only sufficiently reliable data to construct a ranking of the world’s universities. Based on this perspective, as presented in Table 2.1, the major part of the ARWU index is determined by publication and citation in the sciences, social sciences and humanities: 20 percent for articles indexed in Science Citation Index-expanded, and Social Science Citation Index; 20 percent for articles published in *Nature* and *Science*; 20 percent for the number of highly cited researchers in the 21 broad subject categories defined by Thomson/ISI website. Another 30 percent of the index is

determined by the number of winners of Nobel Prizes in the sciences and economics and Fields Medals in mathematics: 10 percent for alumni of the institutions as an indicator of quality of education; 20 percent for staff as an indicator of the quality of the faculty members. The remaining 10 percent is derived from the total scores of the above five indicators divided by the number of full-time equivalent academic staff (ShanghaiRanking Consultancy, 2009).

**Table 2.1: The construction of the Academic Rankings of World Universities**

Criteria	Indicators	Weight %
Quality of education	Alumni of an institution winning Nobel Prizes and Fields Medals	10
Quality of faculty staff	Staff of an institution winning Nobel Prizes and Fields Medals	20
Research output	Highly cited researchers in 21 broad subject categories	20
	Articles published in <i>Nature</i> and <i>Science</i>	20
	Articles in Science Citation Index-expanded, Social Science Citation Index	20
Size of institution	Academic performance with respect to the size of an institution	10
Total		100

Source: ShanghaiRanking Consultancy (2010).

Furthermore, the ARWU group considered that it is impossible to compare teaching and learning worldwide, “owing to the huge differences between universities and the large variety of countries, and because of the technical difficulties inherent in obtaining internationally comparable data” (Liu & Cheng, 2005, p. 133). In line with this, subjective measures of opinion or data sourced from universities themselves are not employed, but only the third-party data that everyone can access is compiled in the calculation of the index. It is claimed that the feedback on the ARWU is positive in general and the ranking has attracted the attention of universities, governments, and other stakeholders worldwide (Liu, 2009; Liu & Cheng, 2005). “The successive measures have proven to be increasingly robust. It is broadly accepted that Jiao Tong provides solid measures of where university research is at”, Marginson remarked (2007a, p. 133).

THEWUR was known as *Times Higher Education–QS World University Rankings* (THE-QSWUR), as its data was supplied by Quacquarelli Symonds (QS), a London-based higher-education media company. Since 2010, THEWUR has been developed based on data provided by Thomson Reuters and has adjusted its

methodology, while QS publishes its ranking, QS World University Rankings (QSWUR) (Butler, 2010; THE, 2010). Different to the ARWU, the *Times Higher Education* aims to construct a holistic ranking rather than one limited to research. Therefore, the THE-QSWUR (2004-2009) was developed based on several indicators, when it was first published in 2004. As presented in Table 2.2, the largest part (40 percent) of the index relies on “peer review”, i.e. an international opinion survey of academics. Research performance, in the form of citations per faculty staff contributes 20 percent of the index only. A similar approach is used to compile a review of opinions of global employers that contributes 10 percent of the index. Another 20 percent is determined by the faculty staff-student ratio, a proxy for teaching quality. Evaluations of the proportion of international students to faculty staff are taken as indicators of an institution’s international attractiveness and comprise 5 percent of the index respectively (THE, 2009).<sup>7</sup>

**Table 2.2: The construction of the Times Higher Education–QS World University Rankings / QS World University Rankings**

Criteria	Indicators	Weight %
Peer review	A survey on worldwide academics’ opinion	40
Employer review	A survey on important international employers’ opinion	10
Citation impact per paper	Number of citations of papers that university staff have published as measured by Thomson Reuters; Scopus from Elsevier and Google Scholar	20
Faculty staff-student ratio	This is based on the number of faculty in relation to the number of students, where a higher rate is conceived of as higher quality	20
International faculty	The ability of the university to attract faculty from other countries	5
International students	The ability of the university to attract students from other countries	5
Total		100

*Note:* From 2007, a normalization method, which involves z-scores, has been adopted in calculation.

*Source:* QS World University Rankings (2011).

In the 2010 THEWUR, the *Times Higher Education* adopts a new methodology, which contains 13 indicators categorised into five categories: teaching (30 percent), research (30 percent), citations (32.5 percent), industry income (2.5 percent) and international mix (5 percent). A worldwide Academic Reputation Survey on research and teaching was carried out to contribute 34.5 percent of the overall ranking score

<sup>7</sup> QS maintains this methodology in QS World University Rankings.

(15 percent for teaching and 19.5 percent for research). In other words, despite the adjustment of methodology, reputation still remains the most important forceful indicator in the ranking system (see Table 2.3) (THE, 2010).

**Table 2.3: The construction of the Times Higher Education  
World University Rankings**

Criteria	Indicators	Weight %
Teaching	Reputational survey – teaching	15
	PhD awards per academic	6
	Undergraduates admitted per academic	4.5
	Income per academic	2.25
	PhD awards / bachelor's awards	2.25
Research	Reputational survey – research	19.5
	Research income (scaled)	5.25
	Papers per academic and research staff	4.5
	Public research income / total research income	0.75
Citations	Citation impact (normalised average citations per paper)	32.5
Industry income	Research income from industry (per academic staff)	2.5
International mix	Ratio of international to domestic staff	3
	Ratio of international to domestic students	2
Total		100

*Note:* A normalization method involving z-scores has been adopted in calculation

*Source:* THE (2011).

Whereas the *Times Higher Education* claimed that it presents a multi-faceted view of the relative strengths of the world's leading universities, it is criticised for its reliance on reputational data that constitutes a strong bias in favour of long established HEIs but a serious disadvantage for new ones. This means that there are “halo effects” (Salmi & Saroyan, 2007) or “anchoring effects” (Bastedo & Bowman, 2010; Bowman & Bastedo, 2011) under which the judgement of one quality influences the assessment of others. In addition, the survey respondents are likely to be subjective in rating, given their lack of familiarity with programmes they have been asked to rate. Also, there is not a common frame of reference of quality for them (Brooks, 2005). Having regard for the strong criticism of reputation survey, the research performance based approach seemingly is more advanced than the approach of measuring reputation in terms of breaking the traditional academic hierarchy down. Nevertheless, it is argued that the research performance based approach is not free from the reputation-based system. This point will be explained later.

In addition to the two principal global ranking systems, this study also pays attention to PRSPWU developed by the HEEACT given that this study focuses on

Taiwan's higher education. Similar to the approach adopted by the ARWU, it mainly measures the research performance of HEIs worldwide to rank the world's top 500 universities in league table order, while it dispenses with the award indicators and the number of leading researchers. The details of the PRSPWU will be delineated in Chapter 3.

According to Usher and Savino (2006), the various indicators used by different rankings can be encompassed by six elements, namely *beginning characteristics*, *learning inputs*, *learning outputs*, *final outcomes*, *research* and *reputation*. Nevertheless, it is argued that research and reputation play especially important roles in ranking exercises, thereby causing a trend towards convergence. This is somewhat reflected by the methodologies used by the two principal global ranking systems, and will be delineated further in this study.

Furthermore, "the flood of cross border private and distance providers, the trend towards internationalisation of tertiary education, and the related increased stakeholders' demand for greater accountability, transparency and efficiency" discussed earlier in this chapter are critical factors in the growth of activities of quantifying quality and ranking academic institutions in recent years (Salmi & Saroyan, 2007, p. 28). Thus, in this study, I see global university rankings as a corresponding development brought by the complex and intimate world of global higher education, and as a way of illustrating the networked competition of HEIs in the globalised and marketised environment.

While this study shows particular interest in *global rankings*, it does not specify a ranking system when investigating the implications of rankings for Taiwan's higher education. This is owing to two reasons. Firstly, though the Taiwanese government set a goal of making one university in its territories become the world's top 100, it did not name the ranking system it aims at. Individual HEIs therefore may have different targets and tactics in response to the government's call for the pursuit of better position in league tables. Secondly, this study aims to look into a "ranking movement" (Teichler, 2011b; Vaira, 2009) or "ranking phenomenon" (Sadlak, 2007) which refers to a hybrid of different mechanisms, namely rankings developed by the media and accreditation institutes, quality assurance measures created by quality assurance agencies, and accountability measures imposed by government agencies (Liu, Wang, & Cheng, 2011; Shin & Toutkoushian, 2011). For instance, the ranking movement in Taiwan mainly consists of the specific funding schemes launched by the MOE, the



evaluation exercises run by HEEACT and the ranking systems (e.g. PRSPWU, College Navigator in Taiwan [CNT], ARWU and THEWUR). In this regard, this thesis is to examine a meritocratic system in which ranking is an essential element.

## **2.4 Four Dimensions of University Rankings**

Based on the literature reviewed above, this section looks at four directions that research on university rankings may point to. According to Hazelkorn (2011), the existing literature on rankings can be roughly categorised into two types: *methodological concerns* and *theoretical understanding*. While the former focuses on questioning and challenging the basis on which the indicators have been chosen, the weighting assigned to them, and the statistical method and accuracy or appropriateness of the calculations, the latter seeks to theorise the growing obsession with rankings in order to demonstrate the impacts of league tables on higher education. In light of the theoretical context mentioned above, I argue that we can view rankings in four dimensions, which form the analytical framework for this study.

### **2.4.1 University Rankings as a Technology**

Focusing on the methodology of rankings, much work has been done to examine the impacts of rankings on higher education. The following two perspectives on the influence of league tables view rankings as a technology impacting various levels, including individual, institutional, systemic and international, of the higher education sector.

#### ***From an Ecological Perspective***

This is the mainstream in analysis of university rankings that primarily aims to illustrate how weaknesses and loopholes in methodology can cause bias in ranking exercises, thereby leading to arguments for and against rankings and proposals to strengthen them. As the focuses of this type of analysis are on the methodologies used by ranking exercises, it could be argued that this stream of studies sees rankings as a technology causing effects on HEIs and their members. As Hazelkorn (2007a) testified:

University leaders believe rankings help maintain and build institutional position and reputation; good students use rankings to “shortlist” university choice, especially postgraduates; and key stakeholders use rankings to influence their decisions about accreditation, funding, sponsorship and employee recruitment (p. 1).

Her study and many others suggest that ranking exercises become an important technology affecting the actions and decisions of stakeholders in their participation in higher education. Stakeholders mainly include *consumers (students/parents), faculty members, university leaders, government and the general public*.

*Students/parents* use rankings to make their choices because rankings provide useful comparative information for making an intangible purchase (Bowman & Bastedo, 2009; Hossler, 1998). Along the neoliberal discourse, better-informed consumers would make better decisions, thereby upholding market accountability (Burke, 2005). Nevertheless, several studies found that students with different backgrounds and perspectives may have different attitudes towards rankings. For example, Hossler (1998) reviewed several studies of US cases and pointed out that information from parents, friends and classmates is more influential than ranking in students’ decision-making, especially for those who are considering local and regional public HEIs (pp. 165-168). The UNITE also reported that rankings were mentioned by only 29 percent of respondents and placed sixth in ordering the factors affecting students’ choice of university (cited in HEFCE, 2008, pp. 12-13). A study conducted in 2002 however reported that 57 percent of first-time, full-time freshmen in the US considered rankings as either a very important or somewhat important factor in selecting their college or university (McManus, 2002, cited in Roberts & Thompson, 2007, pp. 17-18), whereas the importance of rankings has generally increased from 2001 to 2007 in the UK (HEFCE, 2008, pp. 12-13, citing UNITE, 2001-2007). More importantly, it is often claimed that league tables have a greater impact on international students (Hazelkorn, 2008; HEFCE, 2008; Roberts & Thompson, 2007). This observation sufficiently demonstrates why the rise of university rankings, especially the global ones, is considered as a development corresponding to the transnationality in higher education.

Two reasons may explain this point. Firstly, enrolment to an overseas HEI is usually viewed as a more intangible, risky and expensive decision. Ranking for

international students is a handy information tool to help them make the decisions. Hence, “student choice is influenced by ranking and status”; “prestige is considered in decision-making”; and “parents use rankings as a ‘benchmark for judging the best university’, and advise their children accordingly” (Hazelkorn, 2008, p. 196). Secondly, in many cases, higher education is more likely to be a private commodity for international students, as many of them are not subsidised but self-funded. The inexistence of publicness reiterates their role as a consumer. In turn, despite that they may not know the methodology, they would be happy to see the wide use of ranking exercises, as they would regard it as an enhancement of transparency and market accountability.

Under the influence of rankings, *faculty members* are more aware of the importance of engaging in research and competing for research funding. This phenomenon first took place in the UK where the introduction of Research Assessment Exercise (RAE) transformed the way by which the quality of universities is measured. Although the RAE evaluations are not intended to rank but rate universities, it is argued that RAE scores are reconstructed in terms of rankings. As Rolfe (2003) observed, student applicants use commercial league tables to assess university quality and, therefore, university managers make many efforts to enhance the position of the university in these rankings by improving the university’s RAE scores. As a consequence, almost all universities, even the newer ones, are intent on improving their research position and therefore attempt to enhance their research rating and increase research income through recruiting “research stars”. Vaira (2009) called this link between evaluation and rankings “the rankings movement” that has strengthened the process towards the system’s unification and stratification. On the one hand, the emphasis on publishing high quality research can probably make standards for appointment and promotion more clear and transparent (Hazelkorn, 2008). On the other, this can further encourage the “publish or perish” phenomenon in academia. More importantly, this leads to a stimulus to compare research output and teaching quality, thereby altering the traditional role of academic staff and affecting the balance between teaching and research (Dill, 2009; Hazelkorn, 2008).

At institutional level, *university leaders* also agree that rankings influence the willingness of others to partner with them or support their affiliations. In return, they would “consider a potential partner’s rank prior to entering into discussion about research and academic programmes” (Hazelkorn, 2007a, p. 1). Plausibly, this is truer

for key universities in developing and newly industrialised countries where the pursuit of a world-class university is interpreted as building centres at the peripheries (K. S. Kim & Nam, 2007; Marginson & Sawir, 2006). Therefore, they are more eager to establish connection with those “top brands” in the centres. In addition to establishing partnership, Hazelkorn (2008) found that university leaders use rankings to guide their strategic, organisational, management and academic decisions. They would take rankings as a benchmarking tool to set their goal of strategic development. “Aim to be in the top 100 internationally” is a good example of the impact of ranking on the institutional strategic objective. And, this type of strategic goal would affect arrangements for:

Setting student and faculty recruitment targets (e.g. specifying academic entry criteria, making conditions of appointment/promotion clearer and more transparent, appointing Nobel prize winners), indicating individual academic performance measurements (e.g. research activity and peer-review publications, programme development), setting school/college level targets, and/or continual benchmarking exercises (Hazelkorn, 2008, p. 200).

Some HEIs have also restructured their departments to increase their research capacity so as to improve their performance in rankings, especially in the ARWU. A common practice is to establish an institutional research office to “collect data, monitor their performance, better present their own data in public or other official realms, and benchmark their peer’s performance” (Hazelkorn, 2008, p. 201).

*Government’s* decisions are also influenced by university rankings. Salmi and Saroyan (2007) reported that in Germany and Pakistan, where evaluation or accreditation mechanisms are not well developed, rankings are used to monitor and enhance quality (pp. 19-22). In addition, governments use rankings to drive institutional behaviours (Dill & Soo, 2005; Hazelkorn, 2008). This is especially true for governments in East Asian nations because ranking is an effective way to visualise the image of world class excellence that is set as the goal of higher education policy by many governments in the region. Thus, some nations (e.g. Malaysia and Taiwan) request those HEIs benefitting from the policies of role differentiation and funding concentration to climb to the world’s top 100 places within a set period of time (Lo, 2009; Mok, 2007b). Furthermore, rankings also influence the partnership between

national governments and HEIs. Singapore tactically sought such top ranked universities as the Massachusetts Institute of Technology, the University of Stanford and the University of Chicago from the US to be the foreign partners to develop transnational higher education like setting up branch campuses, joint postgraduate programmes, dedicated teaching rooms and laboratories in the territory (Healey, 2008, pp. 339-340). In this regard, it is expected that the willingness to team up with better ranked universities drive the direction of the global-national-local activities mentioned earlier (Jones, 2008; Marginson & Rhoades, 2002).

*General public.* Performance in rankings is also a critical factor affecting the public view on institutional position. If a HEI's ranking is viewed as poor, there will be an accumulation of negativity that may generate public pressure on the institution. Salmi and Saroyan (2007) considered this as a merit of ranking that "stimulate(s) public discussions around critical issues affecting the tertiary education system that are often ignored either for lack of a broader perspective or out of reluctance to challenge established practices or vested interests" (p. 49). They used the cases of France and Brazil to explain that rankings provide the public an opportunity to review their higher education systems in the increasingly competitive world (pp. 49-50). In this view, poor performance in rankings may bring bad reputation, which can lead to decline in student enrolment, private gift, donation, sponsorship and even public funding caused by poor performance in rankings (Brewer, Gates, & Goldman, 2002; Coates, 2007; Hazelkorn, 2008; Jin & Whalley, 2007).

These observations about the impacts of rankings on higher education lead to a debate over the relevance of rankings and a dialogue between rankers and commentators/critics. According to Hazelkorn (2007b), these mythological concerns about rankings can be divided into three categories: *technical and methodological processes*, *usefulness of the results as consumer information* and *comparability of complex institutions with different goals and missions*. The first type of concerns imposes a query on the way in which data is collected and interpreted (Coates, 2007; Eccles, 2002; Federkeil, 2002; McGuire, 1995). From the post-colonial perspective, the selection and interpretation of indicators are full of bias because of the unequal allocation of resources (i.e. the 'centre-periphery' platform) (Altbach, 2006; Deem et al., 2008). The second concern questions whether or not information provided in rankings is useful to guide the students' choice (Brooks, 2005). Views are diverse on this issue (see Hazelkorn, 2007b, pp. 84-85). The third queries the core value of

university rankings, i.e. imposing a “one-size-fits-all” definition on HEIs (Altbach, 2006; Vaira, 2009). As asserted by Turner (2005), in the absence of both absolute standards of efficiency and the ability to differentiate between inputs, process and outputs, league tables compare institutions with dissimilar comparators. He also argued that the technique used in rankings is too simplistic to assess the complex reality. The problem becomes more prominent when making comparisons globally. Creating generally agreed criteria and providing appropriate ways of measuring universities’ performance are of course the possible solutions to the significant problems. Nevertheless, these will not be easy tasks because “there are many conflicting interests at play in the ‘ranking game’” (Altbach, 2006, p. 3).

In sum, by illustrating the impacts on various stakeholders, this type of research on league tables accounts for how rankings are linked with the formation of a new academic environment, in which competition has been a key element of academic life.

### *From a Geographic Perspective*

This dimension of university rankings illustrates how the validity of criteria used for assessing HEIs can uphold national interests in higher education and knowledge production. From this perspective, university rankings are seen as national projects entrenched in the geo-politics of knowledge, and as a technology used by individual countries to achieve their national goals for higher education.

In Marginson’s (2009b; Murphy et al., 2010) analysis of rankings and the old/new map of global knowledge status, the scope of comparison reflects different attitudes and agenda towards global competition in higher education. As he observed, the US shows little interest in engaging in a single system of “global imaginary”. This option of non-engagement is based on an ideology of national exceptionalism that limits the domain of status competition between American universities within the national borders. This is not to suggest that universities and academics in the US are not actively participating in cross-border activities and marketing. Nevertheless, for them, “the ‘world’s best universities’ are identified by *US News and World Report*. Best in America is best in the world. The national horizon is the global horizon” (Marginson, 2009b, p. 30).

Along with this logic, Marginson further argued that the rationale for the reputation-based approach adopted in the THEWUR (and the QSWUR) is to preserve the central status of the UK universities by utilising the heritage of the British Empire.

This argument is supported by the fact that the index of the THEWUR is heavily grounded on a reputation survey (THE, 2009), in which the pool of responses was weighted towards the UK and the former British colonies where *The Times* was well known. Rates of return from Europe and the USA were significantly lower. The return however was not reweighted to correct this compositional bias (Sowter, 2007). Thus, Marginson (2009b) put it:

It elevated the stellar universities in the USA and the UK via the reputational and research indicators; it picked up the best known institutions in national systems, especially those located in national capitals, via the reputation indicators; and it elevated UK and Australian universities involved in intensive cross-border marketing (p. 26).

These interpretations of national use of university rankings have highlighted how the methodologies adopted in particular ranking systems are relevant to maintaining the status quo of the centre-periphery platform in the global higher education landscape.

Concerning the side of the peripheries, it can be argued that the research-based approach to classification adopted in the ARWU presents the way of upholding China's catch-up strategies (Liu, 2007a, 2009). In this view, the ARWU was not initiated to promote the reputation of Chinese universities. In contrast, despite its nationally-supported nature, the criteria used in the ARWU show no favour to Chinese universities. Rather, the indicators and indices used in the ARWU tend to favour the US system. Therefore, some commentators criticise that the prevalence of the ARWU represents the configurations of power that create a global hegemony in knowledge construction (Ishikawa, 2009).

However, the ARWU is still seen as the way of serving the national interest of China, by which Chinese universities are benchmarked with their counterparts in the US as well as other developed nations. In this view, the ARWU is understood as a tool for the Chinese government to monitor the research capacity and, to a lesser extent, the education quality of the Chinese higher education system. This proposition is confirmed by Liu, a principal member of the ARWU group. He said, "the project was carried out for our academic interests, with potential impact on the strategic planning of Chinese universities" (Liu, 2009, p. 2). This insight gives a glimpse of what is occurring behind the scenes of the emergence of the world-class university models.

Though reinstalling the traditional hierarchical structure of global higher education, the emphasis on research in the ARWU index helps China to know where its research-intensive universities stand so as to identify and narrow the gap between the Chinese HEIs and their Western counterparts in accordance with the benchmark of the American comprehensive research-intensive science university; thereby lobbying the Chinese government for suitable support to build world-class universities and supporting “the dream of generations of Chinese” (Liu, 2009, p. 2). This understanding is as much an economic analysis that reiterates the role of research in the knowledge-based economy (OECD, 1996). In this sense, the ARWU is an instrument helping China transit from the labour-intensive, medium technology manufacturing economy to the knowledge-intensive, high-tech economy.

These cross-national analyses of university rankings are important in terms of highlighting specific national interests in the formulation of policy approach in response to the prevalence of a world-class university model and global ranking systems. However, while talking about the connection between global rankings and the new landscape of higher education, there are arguments that rankings are not very useful and relevant to the development of higher education of individual countries. As Sheil (2010) noted, for new and non-research-intensive universities as well as those from smaller nations, it is quite impossible, or at least ineffective, to challenge the centre/superior status of the world’s top research universities, while they can compete well at subject level. For him, “many excellent universities are not placed in the top 500 listings and continue to grapple with the one-size-fits-all approach of rankings... Rankings devalue the role of these ‘niche’ players in the higher education ecosystem and distort the policy signals in many nations” (p. 71). As a consequence, people started to reflect on the road towards the world-class image generated by the one-dimensional global rankings. In Australia, for example, the government has stopped stressing the development of a few elite world class universities to uphold a policy of differentiation and fund concentration. Alternatively, resources were allocated more evenly to different parties in the higher education sector in order to achieve system-wide revitalisation (p. 75).

Meanwhile, a “process of smartening up” in rankings has started, given the many valid reflections on one-dimensional rankings (Butler, 2010; Sadlak, 2010). UNESCO therefore initiated the International Ranking Expert Group (IREG) in 2004. In 2006, the IREG adopted a document containing principles of quality and good practices



called the *Berlin Principles on Ranking of Higher Education Institutions* (see Appendix A for the details of the principles). The Berlin Principles, which consist of 16 principles, generally emphasises:

- the importance of transparency;
- the recognition of the diversity of HEIs;
- the use of audited and verifiable data;
- the preference for measuring outcomes rather than inputs;
- the importance of providing consumers with a clear understanding of all of the factors used to develop ranking and offering them a choice in how rankings are displayed (CHE/CEPES/IHEP, 2006).

The principles are considered as a crucial step in the development of standards of quality and accountability in ranking systems, as it recalls the autonomy of consumers and HEIs in ranking exercises (Harvey, 2008). Since then, people have started to pay more attention to multi-dimensional rankings (Usher, 2008, 2009) and disciplinary specialisation (Lopez-Illescas, de Moya-Anegon, & Moed, 2011).

However, this is not to suggest that the pressure or the tendency towards convergence generated by one-dimensional rankings has been eliminated. In the face of the emerging global hegemony, higher education sectors in different parts of the world are at a crossroads (Stensaker & Kehm, 2009b; van Vught, 2009). This point will be further illustrated in the theoretical understanding of rankings in the geographical dimension. Summing up, this dimension involves a debate over the relevance and usefulness of ranking exercises to boost the quality of higher education, the capability of research and somewhat the economic growth of a nation. And, more importantly, this dimension is concerned with the question of how the landscape of global higher education has been implicated under the growing influence of worldwide rankings.

#### **2.4.2 University Rankings as a Concept**

More recent thinking tends to view rankings as a discipline or a normative force with ideological components. The work of several key social theorists, such as Foucault, Bourdieu, Gramsci and Wallerstein, provide important ideological foundations and elements for this type of study. This analytical approach for examining rankings allows us to understand the theoretical dimensions of league tables.

### *From an Ecological Perspective*

From this theoretical perspective of analysis, rankings are considered as a factor affecting the environment in response to which institutional culture and behaviours are transformed; and as a mechanism altering and controlling students and faculty members' self and peer perception of status and quality.

In regard to the changes of institutional culture and behaviours, several recent studies have made attempts to provide a sociological perspective on understanding the institutional response to rankings. As has been discussed above, accountability, transparency and efficiency have become important elements of contemporary university governance, which aim to hold HEIs accountable through providing procedural and accessible information to educational consumers. This therefore has generated an "accountability movement" that leads to a proliferation of evaluative measures and performativity culture in higher education. Based on the reactive nature of measures, Espeland and Sauder (2007) argued that university rankings, as a form of measures, change expectations and permeate HEIs. Drawing on the concept of reactivity, they noted that two mechanisms, namely, self-fulfilling prophecy and commensuration, are useful for analysing the reactive elements of rankings. As they observed, rankings induce self-fulfilling prophecy that causes a gradual transformation of HEIs "into entities that conform more closely to criteria used to construct rankings" (p. 33). Meanwhile, owing to the nature of commensuration embedded in rankings, a metrical relationship is constructed between HEIs, by which on the one hand, HEIs are united as they are measured by being put in the same category; on the other, they are distinguished as, over time, individual institutions are usually located and limited in specific position tiers. As a consequence, "rankings prompt the redistribution of resources, the redefinition of work, and gaming (p. 33).

Furthermore, drawing on Foucault's (1977) conception of discipline, Sauder and Espeland (2009) argue that "rankings, as commensurate, relative and broadly circulating measures, are more difficult to buffer than other types of institutional pressure" (p. 65), therefore less "decouple-able" than other environmental pressure. This is because rankings are practices of disciplinary power. The natures of rankings therefore are "capillary", "continuous" and "diffuse" (p. 69). To demonstrate the tight coupling between rankings and organisational activity, they analyse rankings as a form of surveillance that magnifies the visibility of HEIs' reputation. This surveillance has three characteristics according to their analysis. Firstly, rankings generate

continuous scrutiny under which faculty members are obsessed. This creates an environment where pressures are sometimes explicit, but often subtle. And, rankings are usually seen as the source of these many pressures even when it is hard to connect them with rankings. Secondly, universities are forced to pay attention to numerous details, given the surveillance of rankings. This “eminence of detail” makes ongoing production of statistics become a routine of universities, which represents that external inspection is transformed into an internal one, thus internalizing the outside control. Thirdly, rankings enable distant and diffuse parties to scrutinise HEIs, even on a global scale. Such a remote surveillance transforms the transparency of HEIs that largely extends the external audiences. Therefore, universities are held accountable to different constituencies. Moreover, normalisation is another mechanism by which rankings discipline universities. Obviously, rankings apply a common metric to compare different HEIs, hence concealing differences and homogenising goals and missions of all HEIs. Yet, rankings simultaneously differentiate one university from another through the creation of hierarchy. While some are hierarchically ranked, those being excluded from this tiered-hierarchy are stigmatised and punished. Consequently, as universities rely heavily on the continuing financial support from external sources, they “have adapted to these shifts in evaluation both in their internal structure and culture as well as in their external presentation of organisation identity” in response to the rankings as a threat in the environment” (Bastedo & Bowman, 2011, p. 4).

For higher education stakeholders, the above changing environment has formed subjective norms toward their choice of university and perceived control over their acceptance of HEIs that influence and incentivise their behaviours and attitudes, “above and beyond one’s own perceptions of quality” (Bowman & Bastedo, 2011, p. 418). Indeed, as Bourdieu (1988) argued, academic power is closely related to reputation and status. To construct the power, academics need a mechanism in which there are several competitors to compete, thereby generating expectation on and limited access to reputation and status. In light of this, it is recognised that university rankings provide a field of competition and create expectations about HEIs and, therefore, people change their behaviour accordingly. For instance, as captioned earlier, a change to a HEI’s rank significantly affects the choices of prospective students and other constituents such as trustees, boards of visitors, and alumni (Bastedo & Bowman, 2011; Espeland & Sauder, 2007). However, such precise distinctions rankings create sometimes are based on insignificant differences. On this

point, Frank (2001) and Cook (Frank & Cook, 1995) consider the market for higher education as an ultimate “winner-take-all market” where a small difference in performance can result in extremely large differences in reward. They suggest that the best ranked may only be marginally better than the second best. Yet, owing to the perception of external audiences, initial reputation of a HEI makes it easier to attract top students and staff, and in turn produces further improvement in reputation (Frank & Cook, 1995). This circular effect consequently causes the “success breeds success and failure breeds failure” (Frank, 2001, p. 3). The crucial point here is that rankings, as mediators, are important in the development of HEIs’ organisational reputation as they can synthesise, select, and simplify information so as to create, shape and propagate reputation. This phenomenon of “reputation race” negatively affects the diversity of missions of different HEIs. Because those HEIs with good traditional academic performance, particularly in research, have an advantage in ranking exercises, thereby encouraging “an increase of mimicking behaviour (imitating the high reputation institutions), and hence to more homogeneity, rather than diversity” (van Vught, 2008, p. 172).

These analyses of rankings provide a dimension in which the meanings and implications of university rankings for organisations and individuals, especially for faculty members and university leaders, are deconstructed and examined in terms of forms and relations of power in the academic field. These approaches demonstrate how the increasingly important university rankings change the ecology of higher education not only apparently but also fundamentally and substantially.

### *From a Geographic Perspective*

The interplay between the global and the local is an important issue in the geography of higher education. As mentioned above, the dialectic of the global and the local largely involves the dynamics of the centre-periphery platforms concerning international inequality in higher education. By and large, this is primarily related to the tension between the global flow of homogenisation and that of heterogenisation in the process of globalisation (Appadurai, 1996; Lo, 2010b; Marginson & Sawir, 2005).

It is argued that a conceptual dimension of rankings in this aspect can demonstrate the relation of ranking to these global flows. As explained by Marginson (2009b), this denotes “its audacious imagining and ordering of the global knowledge economy and the profound implications of this imaging and ordering of the global, for

the patterns of openness/closure, past/future and freedom/heteronomy played out in that space” (p. 28). From the post-colonial perspective, this involves resistance to the Western dominance in discursive terrain, the self-identity of non-Western nations and cultural diversity in the post-colonial world (Hickling-Hudson, Matthews, & Woods, 2004; Tikly, 2001, 2004).

In this antinomy of the knowledge economy, global university ranking has two distinctive sides. The *bright* side of it underlines the openness, novelty and complexity of the global knowledge economy, in which global ranking plays a role of connecting the diverse higher education systems and HEIs with the global knowledge network through its function of benchmarking. In this view, global ranking can be a cardinal project that is installed as the index of value in the global knowledge economy and translates ordering systems into a mathematised economics “in which status functions as a calculable standard of value, enabling prices and a transactional status market” (Marginson, 2009b, p. 28).

The existence of such an open platform reasserts to the values of building research universities, which refer to research-oriented academic institutions with the capability of fully participating in the global academic community, in developing and newly industrialised countries. This becomes an important advocate for the “world class worldwide” perspective on higher education development (Altbach, 2007) and for the “new growth theory” (OECD, 1996) and the theses of “knowledge for development” (Stiglitz, 1999a; 1999b, cited in Peters, 2008) and of “building knowledge cultures” (Peters & Besley, 2006).<sup>8</sup>

In respect of the dialectic of the global and the local, this bright side of ranking is in line with the divergence thesis that views globalisation as a subject to be enacted by local and national agencies and stresses national/local manipulation in the processes of globalisation (Appadurai, 1996; Burbules & Torres, 2000; Hirst, Thompson, & Bromley, 2009; King, 1991; Mittelman, 1996; Waters, 1995). From this viewpoint, global university ranking is a mechanism designed to actualise the global flows. It might be politically, economically and culturally neutral. The real meanings of the global rankings are determined by national and local factors including histories,

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<sup>8</sup> The “world class worldwide” perspective advocates building research universities in low- and middle-income countries. The “new growth theory” sees knowledge distribution power as a determining factor in economic growth in the knowledge-based economy. The “knowledge for development” thesis emphasises the role of university (as knowledge institutions) in national development. The “building knowledge cultures” thesis talks about accumulation of knowledge, as a type of capital, in different cultural and social contexts (see OECD, 1996; Peters, 2008; Peters & Besley, 2006 for detail).

cultures, needs, practices and institutional structures.

As I have argued elsewhere, (Lo, 2011), global rankings are used as non-biased metrics to project the world-class image and to guide the development of higher education in East Asia. The model of an American research-intensive university is selected and publication and citation quantity and quality in western-based journals are picked for the measurement in the ARWU of China and the PRSPWU of Taiwan because these measures are constructive in developing the knowledge production sector in the two societies. They somewhat stand for the interests of the peripheries and, to a certain extent, for global diversity. This argument is based on an assumption that peripheral nations are free and autonomous to decide which university model is attractive and what performance indicators are useful to project world-class excellence precisely.

However, the *dark* side of global rankings represents the closure, convention and hegemony of the global knowledge economy. This is because ranking exercises heavily rely on “prestige” in which “perception dominates the evidence” (Sadlak, 2006). Gramsci’s (1971) notion of hegemony is useful to supplement this discussion. As he believed it, power is exercised through lived experience or common sense. In this regard, it is a social construction. For instance, the THEWUR is mainly grounded on reputation surveys which tend to privilege the privileged. This approach of reputational exercises in turn leads to the reproduction of status and reputation that rewards a university’s performance in marketing rather than its research performance and re-strengthens traditional academic hierarchy (Sadlak, 2006).

More importantly, the nature of hegemony with its grounding in civic society is potentially global.

Every relationship of ‘hegemony’ is necessarily an educational relationship and occurs not only within a nation, between the various forces of which a nation is composed, but in the international and worldwide field, between the complexes of national and continental civilizations (Gramsci, 1971, p. 350).

This is empirically supported by the fact that the citation and publication counts used in the ARWU and the PRSPWU are not free from the reputation-driven framework, given the concentration of publications and citation systems in the major English-speaking centres of science and scholarship, i.e. the US and the UK (Altbach, 2006).

In this sense, global university ranking can be seen as an ordinal project that:

is the creation of a vertical system of valuation which is interpolated into the knowledge economy (or at least the codified academic disciplines, basic research and innovation in the universities). This system of valuation rests on the old/new structure of university authority that rankings have reproduced. The primary move made by the systems of university ranking is to restore an apparent certainty in the face of the open source ecology, by reinstalling a traditional university status hierarchy that maps roughly onto the existing concentrations of wealth, technology and knowledge power, and which by supporting those concentrations is able to buy its own stable reproduction as a hierarchy with a system of value-creation (Marginson, 2009b, p. 28).

This dark side of rankings formulates or at least echoes the convergence effects by which “higher education governance, institutional, organisational and curricular arrangements thus are deemed to converge toward a common pattern” (Vaira, 2004, pp. 492-493) because the global university rankings “largely tend to favour traditional academic performance, particularly in research; these ranking instruments lead to an increase of mimicking behaviour (imitating the high reputation institutions), and hence to more homogeneity, rather than diversity” (van Vught, 2008, p. 172). This demonstrates a structural loophole of global university rankings in which the simplification approach adopted in league tables overlooks the incomparability of complex HEIs with different goals and missions and becomes an intolerable infringement on the independence of individual higher education systems and HEIs (Hazelkorn, 2007b; Salmi & Saroyan, 2007). These arguments are based on a post-colonial perspective from which the global university rankings stand for the Anglo-American hegemony that is an oppression on indigenous culture and knowledge and aims to maintain and legitimize the Western dominance and privilege (Crossley & Tikly, 2004; Deem et al., 2008; Dei, 2006; Hickling-Hudson et al., 2004).

The above divided account of the global university rankings illustrates an antinomy of the geo-politics of knowledge in the contemporary world. On the one hand, it denotes new opportunities of achieving diversification and better research capacity and education quality worldwide through international comparison and peer monitoring. On the other, it reiterates and reinstalls the continuing old hierarchical structure that sets a barrier to the creation of the non western-dominated realm of

scholarship. While the former point imposes a challenge to the significance of the “centre-periphery” thesis (Postiglione, 2005), the latter somewhat reiterates the continuous relevance of the world-systems theory and post-colonial analysis to our understanding of the global landscape of higher education (D. Harvey, 2003; Wallerstein, 1974).

## 2.5 Analytical Framework

This chapter illustrates a four-dimensional framework, which concerns two aspects (i.e. ecological and geographical) of higher education development with two focuses (i.e. technological and conceptual) correspondingly. Table 2.4 illustrates and numbers these four dimensions.

**Table 2.4: Four dimensions of university rankings**

	Technological	Conceptual
	Dimension 1	Dimension 3
<b>Ecological</b>	(Influence of rankings on national policy, institutional governance and individual behaviours)	(Manifestations of the normative power of rankings)
	Dimension 2	Dimension 4
<b>Geographical</b>	(National interests in rankings and the global landscape of higher education)	(Openness and closeness of rankings and the relation to post-colonialism)

In the following chapters, I will use these four dimensions as a lens to study the evidence collected in the field. To provide an explicit explanation, these four dimensions are characterised by different features.

- Dimension 1 focuses on how the criteria and indicators of university rankings directly influence higher education stakeholders.
- Dimension 2 looks at the systemic responses to rankings with a focus on the national interests in league tables and the implication for the global landscape of higher education.
- Dimension 3 investigates the manifestations of normative power imposed by university rankings in the higher education sector.
- Dimension 4 concerns the tensions between the openness and closeness of rankings with reference to post-colonial thoughts.

These four dimensions are interrelated and possibly overlap in some senses, but they



are characterised by distinctive features. This is considered as an intermediate link between chapters, thereby providing a more comprehensive picture of ranking.

The four dimensions form the four sectoral chapters of this thesis. *Dimension 1* reminds us that the criteria and indicators used by league systems might affect the academic work environment. Therefore, in Chapter 5, we will look into Dimension 1 of university rankings through investigating the experience of faculty members from five universities in Taiwan. *Dimension 2* underlines the potential function and use of rankings in the geo-politics of higher education. This guides us to investigate how rankings can be used to promote Taiwan's interests in global higher education in Chapter 6. In light of the connection between power and rankings illustrated in *Dimension 3*, Chapter 7 will examine the attitudes of Taiwan's faculty staff toward rankings in order to illustrate how the normative power of rankings is manifested in the Taiwanese higher education. Finally, based on an antinomy of university rankings drawn from *Dimension 4*, Chapter 8 will discuss the bright side (i.e. the opportunities of enhancing the quality and visibility of Taiwan's universities in the globalised world of higher education) and the dark side (i.e. the challenge of the homogenising effects brought by rankings) of ranking exercises.

## 2.6 Conclusion

This chapter has provided a theoretical basis and an analytical framework for this thesis. It has used a synthesis of literature related to a number of theories (including globalisation, marketisation, managerialisation, network-governance, world-systems theory and post-colonialism) to set out the theoretical context of the present study. It has also given a delineation of the definitions and characteristics of university rankings. Based on these theoretical elements, the chapter turned to illustrate a four-dimensional framework, which set out an analytical framework for this study. Each dimension constitutes a sectoral chapter of the thesis. However, before starting the analysis, it is useful to provide the context of Taiwan's higher education and to explain the methodology adopted in this study. The next two chapters will review the development of Taiwan's higher education and delineate the methodology and methods adopted in this dissertation.

## **Chapter 3**

### **Taiwan's Higher Education in Context**

#### **3.1 Introduction**

The sectoral chapters that follow engage in analysis of the four dimensions of university rankings in relation to higher education policies and reforms in Taiwan. This chapter therefore provides some necessary context for those chapters by delineating the social transformation and the higher education system in Taiwan and examining the nature of higher education policies and reforms with which the implications of university rankings has emerged. It aims to provide a very brief overview of Taiwan's social, economic and political development with a particular focus on their impacts on higher education, and to sketch the quest for world class excellence and the related government responses since the 1990s.

#### **3.2 Social Transformation in Taiwan**

Table 3.1 shows the basic geographical, demographic and economic data for today's Taiwan. Although the island-state is quite small by international standards, the economic data indicates that it should be seen as a wealthy, developed society. However, Taiwan actually took several decades to transform itself from an agricultural economy under authoritarian rule to an economy with a large service and high-tech industrial sector under democracy.

Taiwan had been a Japanese colony for 50 years (1895-1945). It was geared to serving the economic needs of the imperial power until the surrender of Japanese forces at the end of the Second World War (WWII) in 1945. After WWII, the island was returned to the Republic of China (ROC) under the rule of Kuomintang (KMT). In 1949, after the Communist victory in the civil war in mainland China, the KMT fled to the island, where it moved its seat to and quickly established control. Since then, the island had been under the single-party, authoritarian rule until the

democratisation in the 1990s.

**Table 3.1: Basic geographical, demographic and economic data for  
Taiwan, 2010**

<b>Geographical</b>	
Area (square km)	35,980
Agricultural land (%)	25
<b>Demographic</b>	
Population (million)	23.0
Age structure: 0–14 (%)	15.6
Age structure: 15–64 (%)	73.4
Age structure: 65+ (%)	10.9
Population growth (%)	0.2
Literacy rate (%)	96.1
Indigenous population (%)	2.2
<b>Economic</b>	
GDP (NT\$ 100 million, PPP)	136,035
GDP per capita (NT\$, PPP)	587,892
Agricultural sector in economy (%)	1.4
Industrial sector in economy (%)	31.1
Service sector in economy (%)	67.5

*Source:* CIA (2011); DGBAS (2011).

While establishing rigid control over political freedoms, the KMT saw economic development as the route to legitimisation of its authority. Indeed, Taiwan has enjoyed uninterrupted economic growth since the mid-1970s and created an economic miracle, which is founded on various smooth intersectoral structural transformations (Thorbecke & Wan, 2007). In the early phase of Taiwan's development, agriculture played an important role in providing an agricultural surplus to financial incipient industrialisation. In the 1950s, given the initial conditions prevailed (e.g. after land reform), the state needed to generate a reliable and continuous flow of net resources from agriculture into the rest of the economy. Thus, a strategy of import substitution was adopted during the period. In the 1960s, the economy of Taiwan was gradually transited to focus on developing a labour-intensive manufacturing industry. These early industries played a crucial role in absorbing labour released from agricultural production. This smoothly functioning labour market made Taiwan immune from the phenomenon of massive rural-to-urban migration resulting in large-scale under- and unemployment and squatters' settlement around the large metropolitan area, which many developing countries have experienced. In the 1970s, the state refined its

strategy to move in favour of machine-tools industries. While the government helped establish successful subcontracting networks, those domestic relatively small firms made their products competitive in the international market through cost control, punctuality of delivery, and readiness to adapt to the vagaries of the market. This made Taiwan's economy turn to export-oriented successfully (Thorbecke & Wan, 2007, pp. 62-67).

From the 1980s, Taiwan started to move to service and technology industries. This round of transformation was initiated by the restructuring of global production systems, in which foreign direct investment is highly mobile and non-knowledge inputs (e.g. cheap labour) have lost the country-specific characteristics that they once possessed. Developing knowledge-based industries hence became a key to the future economic success of the island-state (Chen, 2004). In this transition to a knowledge-based economy, Taiwan was tremendously successful in developing high-tech industries. For instance, the Ministry of Economic Affairs sponsored the establishment of several public and semi-public think tanks to serve as the research arms of the planning agencies on research and development (R&D) issues during the 1980s. The NSC also made substantial investments to advance basic research, while it was entrusted to develop and manage a number of industrial and science parks that aimed to provide easy access to the R&D facilities of public funded research organisations and national laboratories, the brainpower of major universities, and finance from the state-owned development bank and semi venture capital for investors (Chu, 2007). With all these efforts, nowadays Taiwan has become one of the leading manufacturers in the global semiconductor industry and Taiwanese companies have established close partnerships with brand leaders in the USA, Japan and Europe (Chung, Tsai, & Wang, 2004). In sum, during the past half century, Taiwan was in the transition to a market-oriented, high-tech economy. Yet, in the transition, the government played an active role in guiding the development of the economy through interventions in different sectors and levels (Smith, 2000; Thorbecke & Wan, 2007).

Despite economic success, Taiwan has suffered from a lack of consensus on national identity at home and on recognition in the international community. Internationally, Taiwan does not have diplomatic ties with most nations of the world. Though for many years the ROC claimed itself to be the legitimate government of

China,<sup>9</sup> the People's Republic of China (PRC) considers the island to be a province and would not maintain diplomatic relations with countries that have official ties to Taiwan. Therefore, most countries have chosen to establish diplomatic relations with the PRC rather than with Taiwan. As of November 2009, only 23 countries have diplomatic relations with Taiwan (MOFA, 2009). In addition, Taiwan has no right to play an independent role in world affairs. Since the PRC was admitted to the United Nations and most related organisations in 1971 and the USA switched diplomatic recognition to the PRC in 1979, Taiwan was forced to withdraw from many international organisations, although it was able to join the Asia-Pacific Economic Cooperation (APEC) dialogue as an "economy" and the World Trade Organisation (WTO) as a "customs territory" in the name of "Chinese Taipei" (Parker, 2005).

As for the struggle for national identity, the issue is linked to the sub-ethnic and provincial tensions between mainlanders (*waishengren*) and native Taiwanese (*benshengren*). The former refers to people who or whose parents moved to Taiwan together with the KMT between 1945 and early 1950s. The latter are those who or whose ancestors migrated to Taiwan before 1945 (Law, 2003; Tsang, 2007). Native Taiwanese are the dominant group of Taiwanese people comprising 84 percent of the total population and regard themselves very different to mainlanders.<sup>10</sup> This ethnic and provincial difference has led to the rise of Taiwanese nationalism, which views Taiwan as a historically and culturally distinct community and considers the KMT authority as one of the external, invading forces.<sup>11</sup> This causes conflict with pan-Chinese nationalism that describes Taiwan as an affiliated part of pre-1949 China whose "territory is temporarily reduced to Taiwan but is expected to resume its original territory after the recovery of the Chinese mainland from the Communist Party of China" (Law, 2003, p. 85; also see Schubert, 2004). These domestic and international circumstances together with the history of foreign invasions have made Taiwan to be a "part country" facing credible internal and external threats, in which Taiwanese live with uncertainty about their future (Wade, 1995, p. 129).

To resist both the external and internal pressures, the political elites in Taiwan

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<sup>9</sup> Before democratisation in the late 1980s, the authoritarian and uninterrupted KMT rule was based on the constitution and the political system devised before 1949 and claiming that the ROC government is the government of the whole of China (Tsang, 2007).

<sup>10</sup> Both mainlanders and native Taiwanese are Han Chinese. The mainlanders account for 14 percent of the total population and the rest consist of nine major indigenous people.

<sup>11</sup> Taiwan was conquered by the Portuguese, the Spanish, imperial China and Japan in the past 400 years.

opted for the direction of democratisation in the late 1980s (Tsang, 2007, pp. 177-182). Since then, the KMT stopped suppressing the opposition forces (*dangwai*) in the society. This resulted in the establishment of the Democratic Progressive Party (DPP) in 1986. The revocation of martial law in 1987 was another important sign of democratisation. Under the law, the ideologies of people and many aspects of public life (e.g. the mass media and immigration) were subject to tight controls. The revocation then led to a more relaxed political atmosphere, in which the DPP had grown to be a legitimate opposition party and a significant political force that the general public accepted to be an effective check on or even a viable potential alternative to the political domination of the KMT. In the 1990s, the island-state gradually made the transition to a democratic, multi-party political system. Direct elections were unprecedentedly introduced for local councils and the Legislative Yuan (the legislative branch), and also for the executive posts at various levels (including county magistrates and city mayors) in 1989, the Taiwan provincial governor and the mayors of two municipalities, Taipei and Kaohsiung, in 1994, and the President in 1996. In 2000, the KMT's ruling position was replaced by the DPP until the KMT regained the presidency in 2008. In this sense, the process of political democratisation has been successfully completed in Taiwan, even though it has often been linked to the infiltration of gangsters and corruption in the electoral process (Tsang, 2007, pp. 188-189).

It is noteworthy that the democratisation process is not only driven by socio-political factors including the growth of civic society and of an undercurrent of dissent led by political elites (Tsang, 2007), but also by socio-economic conditions, such as "successful economic development; the demand of entrepreneurs, business people and professionals for more autonomy; the rise of the middle class; the increased literacy and education levels of people; exposure to democratic values through trading and interaction with the outside world, particularly Western countries; and a Western-trained bureaucratic elite" (Law, 2002, p. 64).

Nevertheless, the tension between the two main sub-ethnic groups has not been released, despite the success of democratisation. In contrast, it is often reignited particularly in political elections. To build up a new national identity, the KMT authority under the leadership of President Lee Teng-hui abandoned pan-Chinese nationalism insisted by President Chiang Kai-shek and President Chiang Ching-kuo and advocated the notion of "new Taiwanese" "implying a fresh, and shared 'national'

identity for those living in Taiwan who are willing to strive and sacrifice for the ROC regardless of when they or their ancestors arrived, and their provincial heritage or native tongue” (Law, 2002, p. 66). Popular acceptance of the idea represents the emergence of a “new Taiwanese consciousness”. This brought the policy of self-limitation, under which the Taiwanese government had given up its constitutional legitimacy (*fatong*) over the whole of China. This implied the recognition of legitimacy of the Communist rule in the Chinese mainland. Meanwhile, it started to promote Taiwan and the PRC as “two political entities” with “special state-to-state relations” in the international community (Schubert, 2004). Such a policy was continued and reinforced under the leadership of President Chen Shui-bian of the DPP (see Chu, 2004; Kao, 2004 for detail).

This notion of “new Taiwanese” has also brought the policy of “de-sinification” or “Taiwanisation” at domestic level. For example, the Government of Taiwan Province was abolished in 1999 to remove the notion of Taiwan as a province of China and to reinforce the notion of Taiwan as a state. Another example of the efforts for de-sinification is the emphasis on Taiwan as a collectivity in, by and for itself through education. As a consequence, homeland studies and homeland languages were introduced to replace the sino-centric curriculum that emphasised knowledge about China. The idea of Taiwan as the ultimate home mastered by Taiwanese people is also promoted in education (Law, 2002). All these primarily aim to cultivate a sense of “Taiwanese subjectivity” (*Taiwan zhutixing*), as anti-Chinese nationalists believe that Taiwanese perspectives were peripheralised in the past (Lynch, 2004; Schubert, 2004). At the same time, signs of affiliation with the Chinese Mainland are removed or reduced (Law, 2002).

Summing up, in the post-1949 era, the Taiwan-centric notion that serves as a self-conscious project of collective identity construction and nation-building has come together with economic success to Taiwan, although politically the island has not declared independence and still holds ties with the Chinese mainland. Within this context of social transformation, the following section turns to describe the general picture of Taiwan’s higher education.

### 3.3 A General Picture of Higher Education in Taiwan

#### 3.3.1 History and Basic Orientation

The modern education system in Taiwan was founded during the period of the Japanese occupation. The Japanese colonial government imposed western-style education systems with a main objective of assimilating the island and integrating it into Japan. The education system was started with the establishment of an elementary education sector that aimed to equip the masses with basic knowledge and modern skills and to educate people in political obedience. The higher education system in Taiwan commenced with four institutions (one university and three colleges) during the late 1920s (Tsai & Shavit, 2007). At that time, the system had only one university, Taihoku Imperial University, which was established in 1928 by the Japanese colonial regime, largely owing to Japan's ambition of expanding in south China and the South Pacific. Taiwan was considered to be a suitable place to conduct the research and to train the manpower that the Japanese colonisers needed (Wu, Chen, & Wu, 1989, pp. 257-263). In fact, the Taiwanese who aspired to higher education were carefully channelled into the professions that the Japanese colonial government wanted to promote among the population. Despite that the education system was founded on strong political and economic intentions, when the Japanese left Taiwan in 1945, Taiwan was one of the most literate populations in Asia (Woo, 1991).

During the early period of the KMT rule in Taiwan, the number of institutions slightly increased to one university and four colleges. This was because the immediate educational goal of the KMT government was to clear Japanese influence and to establish the national identity of China at that time. Therefore, in 1945, Taihoku Imperial University was renamed National Taiwan University, and many institutions were renamed and reorganised (Wu et al., 1989, p. 263-264; Zhang, 2003). In the 1960s, in response to the global trend of higher education expansion, there was the first round of higher education growth in the island-state (Schofer & Meyer, 2005; Wang, 2003). During this period, the number of HEIs in Taiwan increased from 27 in 1960 to 91 in 1969. The number of students also grew rapidly from 34,623 in 1960 to 182,221 in 1969. However, the newly established institutions in this round of higher education expansion were mainly junior colleges (*zhuanke xuexiao*). Their number increased from 12 to 69 in a decade. This was because the expansion primarily aimed



to provide more skilled technicians for the economic development. Meanwhile, the private sector replaced the public sector forming the majority of junior colleges through this round of expansion. Accordingly, the percentage of private junior colleges rose from 36.2 percent in 1960 to 73.1 percent in 1969 (Wang, 2003, pp. 262-263). From the 1970s to the mid 1980s, the expansion of the higher education system slowed down. And, the private sector was not allowed to establish any new institution. As a consequence, the number of HEIs only increased from 92 in 1970 to 105 in 1985. However, the growth rate of the number of students was low but steady during this period. The number of tertiary students increased from 201,178 in 1970 to 416,158 in 1985 (Wang, 2003, pp. 263-265).

### 3.3.2 Regulation

Despite that the private institutions became the majority of junior colleges, the state still played a dominant role in running universities and colleges (*duli xueyuan*) because higher education was seen as an important way to impose ideological control over the people before the mid 1980s. In fact, the KMT government adopted a highly centralised model to govern the higher education sector. At the top of the pyramidal chart, the Executive Yuan (cabinet) has the responsibility to administer the social, economic, military, judicial, educational and policy-planning needs of Taiwan. The Ministry of Education (MOE) is the executive department that deals directly with universities and colleges under the Yuan (Smith, 1977).

Before the implementation of the policy of educational decentralisation in the late 1980s, education policy-making power was retained in the hands of the government with the dominant role played by the MOE. The Ministry had strictly controlled almost all aspects of the curriculum and administration. It had final say on numerous matters, including hiring, promotion and dismissal of faculty staff, admission and graduation of students, design of curricula, size of departments, and so on. As an ideological control, all academic publications were assessed and screened by the National Institute for Compilation and Translation of the MOE. Students had to take compulsory political ideology courses, like the thought of Dr. Sun Yat-sen, in order to shape students' values and behaviours into those expected by the KMT and its leaders (Lo & Weng, 2005; Smith, 1977; Zhang, 2003). Rigid control over the higher education sector has been released since the democratisation and the following educational decentralisation. This has brought significant effects on university

governance in Taiwan. This point will be further elaborated later in this chapter.

Another important agency in higher education administration in Taiwan is the National Science Council (NSC). The Council was established in 1959 serving as the highest government agency responsible for promoting the development of science and technology under the Executive Yuan. One major function of the NSC, which appreciably influences the higher education sector, is its role of funding academic research projects. The Council is responsible for granting research funds to HEIs and research institutions to conduct research. According to the NSC's website, "proposed research projects must pass through two stringent rounds of review; if approved, projects can receive financing from the Council for research personnel, equipment, books and information, consumable materials and overseas travel expenses" (NSC, 2010). There are seven types of research grant that provide financial support for academic research, industry and university cooperation, and application of R&D results. It is noteworthy that the NSC is the agency financing the Program for Aiming for Top University. This is a program that draws a lot of attention from the academic community in Taiwan and will be discussed later in this chapter and Chapter 5.

### **3.3.3 Funding**

The government is an important funding source in Taiwan's higher education, although the government is no longer the sole funder for education with the rise of private provision. Generally speaking, the government fund consists of two components: the recurrent component that provides financial support for the daily operation of HEIs, and the program-based component that sponsors specific areas of higher education on a project-by-project basis. Table 3.2 shows the allocation of funding from 2008 to 2010. The program-based component (referring to the fund for the Program for Aiming for Top University and the Program for Encouraging Teaching Excellence in Universities only) makes a significant proportion of the resources that indicates an increasing degree of competition for funding in recent years. More importantly, as will be examined below, public universities have been granted more financial autonomy through reforming the funding system. As a consequence, as shown in the table, 35 to 40 percent of incomes of public universities were from fund-raising activities in the last three years. In fact, universities have been searching for non-government sources of income, like tuition fees, income from partnership with the business sector and social donation. For instance, universities

have become autonomous to decide the level of tuition fees since 1999. However, there is criticism in the society that the financial reforms have increased the financial burden of university costs on students and their parents.

**Table 3.2: Higher education funding allocation in Taiwan, 2008–10**

(Unit: %)

	Recurrent component			Program-based component			Fund raised by public HEIs
	Recurrent fund to public HEIs	Subsidies to private HEIs	General cost	Top University Program	Teaching Excellence Program	Other <sup>1</sup>	
<b>2008</b>	35	14	2	4	2	/	43
<b>2009</b>	32	13	2	3	3	12	35
<b>2010</b>	35	13	2	5	2	5	38

*Notes:* (1) Other refers to the Program for Infrastructure Expansion and Economic Revitalization that is an intermediate response to the 2008 financial crisis. It is a special grant that aims to provide university graduates of 2006 and 2007 with job opportunities.

*Source:* MOE (2010c, p. 22).

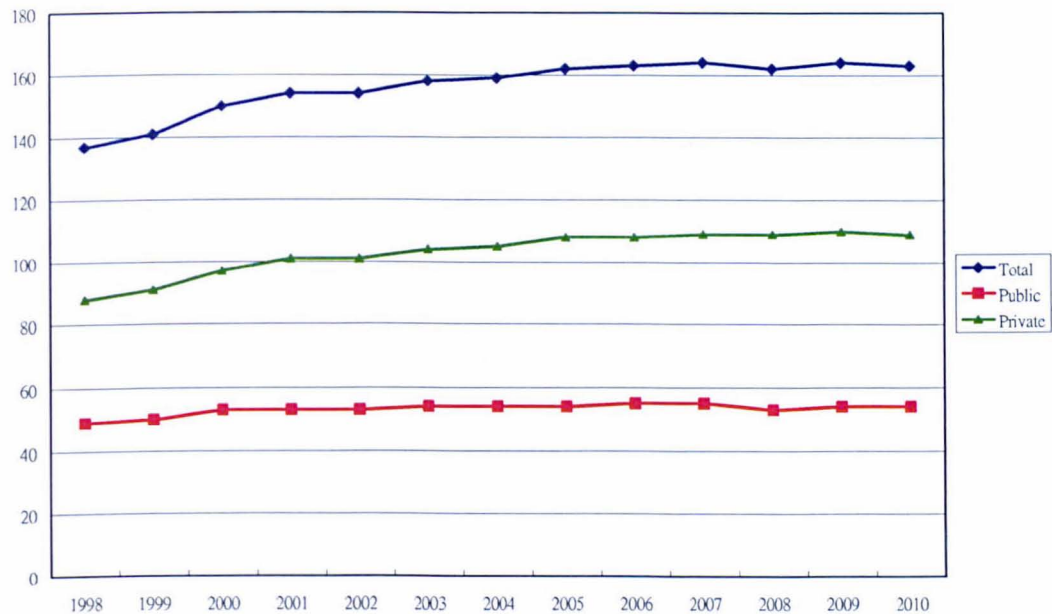
### 3.3.4 Provision

In Taiwan, as said, the private sector played a significant role in the increase of education provision in junior colleges during the 1960s. From the mid 1980s, the Taiwanese government began another round of expansion for higher education. In 2000, the number of HEIs increased to 150 and the number of students reached 1,008,241. Importantly, many of the newly established institutions were universities and colleges during this period. In fact, the number of universities and colleges increased from 28 in 1986 to 127 in 2000, while there was a drop in the number of junior colleges (from 77 to 23) during the same period of time (MOE, various years). It is important to note that there was a growth of both public and private universities in this round of expansion. Since 1999, the number of private universities has exceeded that of public universities.

The rationale for the rapid increase of universities and colleges is that after the political democratization the Taiwanese government can no longer merely consider manpower development, but needs to take public voice into account when it is planning its higher education policy. In response to demands in the society, providing more university places became an important strategy for developing the higher education system (Wang, 2003). However, in addition to the local political factors, Taiwan's awareness of the global economic trend and the associated transition to a

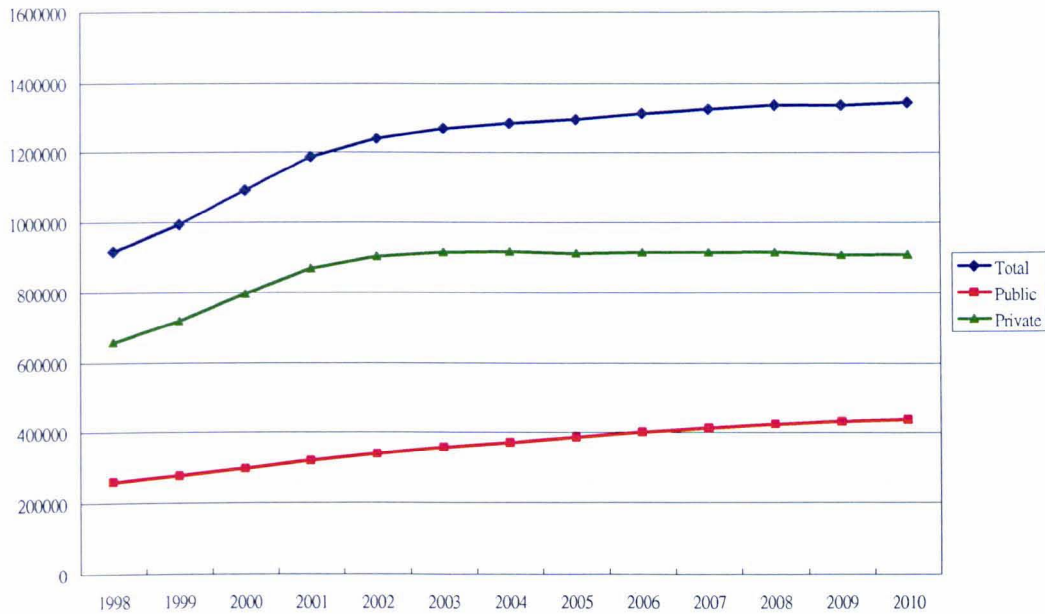
knowledge-based economy should not be neglected in explaining the expansion of higher education in the 1990s (Lo & Weng, 2005). Indeed, as analysed by Schofer and Meyer (2005), the economic development produces the global discourses of pro-educational culture and scientisation of society that have become important factors affecting the Taiwanese governments' decision on higher education expansion. As a result, Taiwan has accomplished the massification of higher education through the second round of higher education expansion in the 1990s (Trow, 1974; Wang, 2003). In 1998, there were 173 HEIs (39 universities, 45 colleges and 53 junior colleges), enrolling 915,921 students at various levels of tertiary education. In 2010, there were 163 HEIs (112 universities, 36 colleges, 15 junior colleges) enrolling 1,343,603 students at various levels of tertiary education. 67 percent (109 institutions) of the institutions are private ones (MOE, various years).

**Figure 3.1: The number of higher education institutions in Taiwan, 1998–2010**



Source: MOE (various years).

**Figure 3.2: The number of tertiary students  
in Taiwan, 1998–2010**



*Source:* MOE (various years).

After Taiwan successfully achieved the transition from elite to mass higher education, the major concern over higher education has shifted from quantitative expansion to qualitative consolidation since the late 1990s. In fact, as illustrated in Figures 3.1 and 3.2, the higher education expansion has slowed down since 2000 and the number of HEIs has slightly decreased in recent years. Some universities and colleges even have difficulties in recruiting students owing to the rapid decline of birth rate and increasing competition between institutions. Furthermore, Taiwan's entry into the WTO in 2002 and the increasing mobility of students and higher education providers have also implied that HEIs in Taiwan are facing more and more competition (Chen & Lo, 2007). Therefore, the Taiwanese government has launched a series of reforms and policies that aim to promote excellence in higher education in the last two decades.

### **3.4 Reforms and Transitions since the 1990s**

The quest for building world-class universities has become a trend of higher education development in several East Asian countries where the massification of higher

education has been accomplished. This formulated a “world-class” movement that stands for an enforcement of catch-up strategies in higher education within the context of transition toward a post-industrial, knowledge-based economy. In fact, as captioned in Chapter 1, China, Japan, South Korea and Malaysia have clearly stated their goal of building world-class universities in their territories, whilst Hong Kong and Singapore have taken the pursuit of world-class excellence in higher education as a slogan for their policy of developing themselves to be regional education hubs (Mok, 2008a). This world-class movement is closely related to the rapid growth of influence of university rankings in East Asia because the league tables provide a clear and simple goal for both governments and individual HEIs (Deem et al., 2008). Taiwan is not immune from this trend and started its pursuit of world-class excellence after its accomplishment of the massification of higher education. In this regard, the following sections will delineate the policy initiatives and attempts made by the Taiwanese government under the general theme of enhancing higher education quality since the 1990s.

#### **3.4.1 The Return of Autonomy and Decentralised Governance**

As discussed earlier, the revocation of martial law in 1987 provided a more relaxed political atmosphere in which the civic society had further developed and the call for relaxation of control over academia and democratisation on campus had grown in Taiwan (Law, 2003; Weng, 2003). Besides, a deregulated and decentralised governance model is considered to be in line with the global trend of destatisation and managerialism (Lo, 2010b). In this context, the idea of deregulation (*songbang*) was introduced to redefine the relationship between government and academics. In the mid 1990s, the Taiwanese government promulgated its education reform documents, with which decentralisation policies were adopted to devolve powers in various aspects so as to enhance the operational capacity of institutional self-governance for pursuing academic excellence (Education Reform Council of Executive Yuan, 1996; MOE, 2001).

The decentralisation and empowerment reforms can be divided into institutional and individual levels. At institutional level, the government can grant more financial autonomy to public universities through adjusting origins of resources (i.e. public moneys and private moneys) allocated to HEIs (Brown, 1994). Before 1994, the government was the major funding source of all public universities and imposed a

tight budget control over public universities. To grant fiscal autonomy to individual HEIs, the government replaced the Public Budget System with the new University Fund System. Under the new system, 80 percent of the public HEIs' incomes are granted by the MOE, while 20 percent are from other sources, including tuition fees, collaboration with the private sector, launching continuing education, donation and so on. While the MOE would not cover any deficit, the public HEIs are allowed to retain the surplus as their contingency funds. This policy intends to give the incentives and flexibilities for the universities to diversify their sources of income by actively seeking grants and donations from the society. In addition, the government has also changed its funding policy towards private HEIs. To provoke competition between public and private universities on the same ground, the government has taken a 20 to 25 percent cut of its budget for public universities since 1999. With the budget cut, the government is able to partially fund private universities in the forms of reward, subsidy and financial assistance. Since 1999, 20 percent of the revenue of private universities has been granted by the MOE (MOE, 2001).

Moreover, institutional autonomy was enhanced in personnel management. In past, the appointment of university presidents was decided by the state. The revision of the *University Law* in 2002 then broke the state's monopoly over the recruitment of university heads. The revised *University Law* incorporates the participation of academics into the selection process of university presidents and also allowed faculty members to shortlist a few president candidates for the MOE's final choice and appointment (Law, 2003; MOE, 2007c). To prevent controversies, the selection process has been further amended and simplified. Presidents of public universities are appointed by a selection committee which consists of members from the university senates, external parties and officials of MOE (Article 8). And the *University Law* states that half of the members of the university senates should be the representatives of faculty members (Article 15). In addition, the restrictions on nationality have been removed. Universities are allowed to appoint overseas scholars to be presidents as well as other key positions of the universities (see Articles 8 and 13). Such a legal amendment has facilitated universities to recruit academic leaders through world-wide search. Although the amendment to the selection process of university president is criticized as having weakened the democracy on campus and has led to a shift from professional control to administrative control (Hsiao, 2005), the promulgation of the *University Law* has stood for the upholding of professionalism through participatory

management in higher education.

Furthermore, faculty members are granted rights to screen and select their fellow faculty members. Accordingly, an evaluation committee would be formed in every university to deal with the promotion and selection of academic staff, and the membership of the committee is decided by the senate in university (MOE, 2007c). Apparently, the establishment of a teacher evaluation committee has led to a transfer of personnel authorities from university management to faculty members. The active involvement in university management transforms faculty members' role to be a facilitator and coordinator to reinvent the organizational culture in university, thereby providing the function of "check and balance" function in university governance.

At individual level, the promulgation of the *Teachers' Law* in 1995 is considered as an important initiative to enhance the professional autonomy of the university faculty staff. It is important because the legislation grants the legal status to the teaching profession and prescribes the rights and duties of teaching professionals. Article 16 of the Law states that teaching professionals enjoy professional autonomy and have the right to involve in school administration. More importantly, individual autonomy of teaching professionals has been institutionalized. Article 27 of the Law allows teaching professionals to organize their associations at institutional, local and systemic levels to protect their rights and professional autonomy. Meanwhile, the Law states that educational institutions are not allowed to set any terms and conditions to limit the participation of teaching staff in their associations, or to dismiss them because of their involvement in the association's positions and activities (MOE, 2006, Article 28). The National Teachers' Association then was established in 1999, while numerous local and school teachers' associations had been at county and institutional level respectively. The establishment of the teachers' association marks the opening of direct dialogue between teachers and the government. Accordingly, the teachers' associations function as teachers' representatives in the negotiation with the government departments regarding terms and conditions of teacher appointments. Moreover, the associations also give their advice on various educational issues and send their representative to participate in many relevant statutory bodies. Consequently, teachers have become one of the major stakeholders and important participants in education policy-making.

It is foreseen that incorporation of public universities is the next step of decentralisation in Taiwan's higher education (Tien, 2008). Under the current system,



public universities are under the supervision of the MOE and heavily depend on the government's subsidies. Moreover, public universities still have relatively limited autonomy in personnel management given that most laws and regulations governing the civil servants also apply to the staff members of public universities in Taiwan. Within this context, the idea of incorporation was initiated by the MOE in 2001. According to the government's plan, the legal status of public universities would be transformed into an administrative legal entity. By the incorporation, the government expected that public universities would become more autonomous, mainly in financing and personnel. For instance, the terms of service of university staff would be delinked from those of the civil servants. Regarding financing, though the government budget remains the major financial source of public universities, the MOE would no longer monitor the finance of individual institutions. Instead, a non-statutory advisory body, the Higher Education Review Committee, would be formed to function as a funding committee to allocate funding to public universities (MOE, 2001). The policy is welcomed by the presidents of top public universities as they can gain more power under the proposed system but face little pressure on funding as the reputation of their universities guarantees sustainable funding sources from donation and research grant. However, there are concerns for financial difficulties that some universities may face after incorporation. Also, incorporation may further politicise university governance as the new mechanism for selecting university presidents can involve more parties outside the university. As a result, the Legislative Yuan, the legislature of Taiwan, used its veto to block the proposal for the incorporation of public universities in 2003 and 2005 respectively. But, the government has alternatively used extra funding as an incentive to encourage some public universities to be incorporated voluntarily (Tien, 2008).

### **3.4.2 Promoting Institutional Integration and Inter-institutional Collaboration**

In addition to decentralising authorities to individual HEIs, the Taiwanese government also attempted to enhance the quality of higher education through promoting institutional integration between HEIs (MOE, 2001). Thus, the MOE launched the Program for University Integration and Inter-institutional Cooperation, an additional funding scheme in 2002. Later, in 2004, it was renamed the Program for Promoting Integration between Research Universities and was budgeted at a total amount of NT\$ 787 million. The Program aimed at offering additional grants for universities to

integrate their research resources, including manpower, facilities and techniques, on both an intra and inter-institutional basis. For internal integration, universities are encouraged to group their top researchers into research units/teams on a specific research area in formulation of intercollegiate and interdisciplinary teaching and research engagements. The MOE attempted to promote institutional integration through implementing mergers between HEIs at the beginning of the reform. However, mergers met strong opposition from faculty members of the universities selected. For instance, the proposed merger between the National Taiwan University and National Taipei Normal Institute was abandoned because of the opposition from the faculty members of both the institutions. In fact, only a few cases of merger were successfully implemented since the government launched the policy initiative (Chen & Lo, 2007).

Despite the failure of adopting university mergers, the government was rather more successful in promoting institutional integration and deep collaboration by establishing an inter-institutional collaboration system. Since 2002, the MOE has promoted the establishment of university alliances to strengthen institutional cooperation in both research and teaching. Therefore, four university alliances, namely Taiwan University System, University System of Taiwan, University System of Formosa and Taiwan Joint Normal University System, were formed to forge resource sharing between member institutions. These four alliances consist of 22 HEIs across the island and include the top universities in Taiwan. For example, the University System of Taiwan (UST), whose members include National Central University, National Chiao Tung University, National Tsing Hua University, and National Yang Ming University, have developed a wide range of collaborations among the member institutions. Four research centres were established under the system to conduct joint institutional research projects in four areas, including biomedical science, nanoscience, information system and electronics, and energy and environmental science. Joint admission system and credit transfer arrangements were developed to facilitate cooperation in teaching between the members institutions. Furthermore, the UST has allowed the member institutions to share their library resources, academic manpower and computing facilities through building joint institutional networks (UST, 2009).

Apart from university alliances, the Taiwanese government also encourages HEIs to establish regional teaching resource centres for resource sharing and inter-institutional collaboration in teaching. These regional teaching resource centres are

funded by the Program for Regional Teaching Resource Centre (labelled as 5 in Figure 3.3 below). Different to the alliances that are formed by HEIs with considerable research capacity, the regional teaching resource centres are formed by institutions from different layers in the tiered higher education system (see Figure 3.3). A university from the higher tier would play the role of “core” institution to help its partner institutions, which usually are from the lower tiers, enhance their quality of teaching through improving their curriculum, setting up an inter-institutional teaching evaluation mechanism, providing training to their teaching staff and developing inter-institutional courses of general education for students from member institutions (MOE, 2009c). For example, National Cheng Kung University, one of the top research-oriented universities, plays the role of core institution in Yulin Chiayi and Tainan Regional Teaching Resource Centre that functions as a network to integrate and share teaching resources among Cheng Kung and 16 other institutions in southern Taiwan (Yulin Chiayi and Tainan Regional Teaching Resource Centre, 2009). As of November 2008, there were six regional teaching resource centres consisting of 28 HEIs across the island.<sup>12</sup> According to the MOE’s plan, there will be at least nine regional teaching resource centres by 2012 (MOE, 2009c).

### 3.4.3 Promoting Performativity Culture

After the accomplishment of massification of higher education, the Taiwanese government started to change its governance philosophy from “government control” to “government supervision” through developing a quality assurance mechanism and promoting performativity culture (Chen & Lo, 2007; van Vught, 1998). In the early 1990s, the MOE commissioned professional agencies, including the Chinese Society of Mechanical Engineering, Chinese Management Association, Chinese Institute of Electrical Engineering and so on, to conduct evaluation on programmes offered by universities. During this period, evaluations were conducted on an institutional basis. HEIs were encouraged to develop their own features. However, limited resources of these professional bodies restricted their capabilities of coping with the evaluation. Hence, the revision of the *University Law* in 1994 authorised the MOE to take charge of evaluation of HEIs. The MOE then set up the Council of Academic Review and Evaluation to conduct the evaluation. It also entrusted academic organisations or

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<sup>12</sup> The six regional teaching resource centres are: (1) Northern Taiwan; (2) Yunlin, Chiayi and Tainan; (3) Central Taiwan; (4) Eastern Taiwan; (5) Kaohsiung and Pingtung; (6) Taoyuan, Hsinchu and Miaoli.

professional evaluators to carry out regular evaluation and to publish the evaluation results. In 2005, the HEEACT, which was funded by the MOE and 153 universities, was established. It is a statutory body that serves as an independent agency conducting higher education evaluation and accreditation. From 2006 onwards, the HEEACT was commissioned to conduct regular evaluation on a five-year basis. In the 2006-2010 period, it was assigned to conduct a nation-wide evaluation assessing the performance of 79 universities, and over 2,000 departments and research centres in five years (see Table 3.3 for the results). Five aspects that focus on the quality of teaching are covered in the assessments. Firstly, individual programmes are assessed to see whether or not their goals and objectives are clearly defined; whether or not they have their own characteristics and a self-improvement mechanism. Secondly, the design of the curriculum and the teaching methods are assessed based on their relevance to the teaching objectives. The third consideration is students' opportunities to join extra-curricular and overseas activities. Fourthly, professional standards and research performance would be taken into account with reference to the number of research postgraduates, the number of faculty members with a doctoral degree and the ratio of teachers to students etc. Lastly, the performance of graduates would be considered in the evaluation. Their competences and the feedback from employers and other stakeholders are used as the indicators. A pass in the evaluation exercise is vital for survival. If a department fails to pass the evaluation for two consecutive years, the MOE would request the university terminate its enrolment and operation.

However, there is concern about how institutional autonomy is upheld in the newly established quality assurance system. In fact, some universities have been granted the status of self-accreditation since the early 2000s. The revision of the *University Law* in 2005 further extended the scope of self-evaluation to teaching, research, service, counselling, administration, and student participation. Universities are also authorised to formulate their own regulations on evaluation. Nevertheless, the *University Evaluation Regulation* promulgated in 2007 prescribes that universities are under obligation to be evaluated by the MOE and its agency (i.e. the HEEACT). According to the Regulation, the scope of external evaluation includes a wide range of university affairs, such as research, teaching, curriculum, student affairs, personnel, accounting, and so on (Article 4), while the importance of self-evaluation is reiterated (Article 5). Importantly, the results of the evaluations would be used as a consideration in the MOE's plan for the development, funding and tuition fee level of

the universities (MOE, 2007b). To achieve a balance between accountability and autonomy, the existing evaluation mechanism combines the practices of self-evaluation and external quality assurance. While the institutions are required to organise self-evaluation exercises according to the guidelines, the HEEACT would conduct field visits as the presence of external quality assurance dispensation.

**Table 3.3: Results of the evaluations conducted by HEEACT, 2006–10<sup>1</sup>**

	No. of institutions evaluated	No. of departments evaluated	No. of programmes evaluated	<i>Results</i>	Passed	Watch list	Failed
1 <sup>st</sup> round (2006) <sup>2</sup>	17	362 (100%)	/		279 (77.1%)	71 (19.6%)	11 (3.0%)
2 <sup>nd</sup> round (2007) <sup>2</sup>	10	242 (100%)	/		159 (65.7%)	55 (22.7%)	27 (11.2%)
3 <sup>rd</sup> round (2007) <sup>3</sup>	9	264	458 (100%)		386 (84.3%)	65 (14.2%)	7 (1.5%)
4 <sup>th</sup> round (2008) <sup>3</sup>	9	231	418 (100%)		376 (90.0%)	42 (10.0%)	0 (0%)
5 <sup>th</sup> round (2008) <sup>3</sup>	8	258	455 (100%)		425 (93.4%)	30 (6.6%)	0 (0%)
6 <sup>th</sup> round (2009) <sup>3</sup>	11	220	378 (100%)		336 (88.9%)	42 (11.1%)	0 (0%)
7 <sup>th</sup> round (2009) <sup>3</sup>	9	242	511 (100%)		484 (94.7%)	27 (5.3%)	0 (0%)
8 <sup>th</sup> round (2010) <sup>3</sup>	6	50	78 (100%)		/ <sup>4</sup>	/ <sup>4</sup>	/ <sup>4</sup>

*Notes:* (1) Four rounds of re-evaluation were conducted during the period. (2) This round of evaluation is department-based. (3) This round of evaluation is programme-based. (4) The results of this round of evaluation were not publicly announced because the institutions being evaluated are military academies.

*Source:* HEEACT. (2010a)

In addition to the emergence of the evaluation system, the establishment of the Taiwan Social Science Citation Index (TSSCI) is considered to be a milestone of building a research-oriented performativity culture in Taiwan's higher education. Indeed, research is viewed as a key measure to reach world-class status because world-class universities are necessarily research-oriented and -intensive (Altbach, 2004a). Therefore, to promote research culture and atmosphere in the domestic academic fields, heavy weight has been placed on research output in measuring

university performance in Taiwan. Citation indices, such as SCI and SSCI from the USA, were assumed to be strong indicators reflecting the research performance of a faculty member. However, using the citation indices based in foreign countries met strong opposition from the local academic community, especially from the fields of social sciences. This was because all major citation indices were developed upon journals in English. Yet, owing to language restriction and cultural bias, many academics in Taiwan had difficulty publishing their research in these publication outlets and query whether or not these journals are suitable outlets for local studies (Kuan, Chang, Chang, & Ho, 2006).

In response to the unanimous opposition from the field, the NSC, the key funding agency which provides major grants and support to academic research and other scientific projects under the Executive Yuan, launched TSSCI in 2000. TSSCI is a citation system adapted from SSCI. It is inclusive of nine disciplines (namely, anthropology, sociology, education, psychology, legal studies, political science, management, economics, and area studies and geography) incorporating 82 journals based in Taiwan. Similar to SSCI, impact factors of individual journals would be calculated and reported in the journal citation report to illustrate the citation rate and impacts of the journals (Social Sciences Research Centre of National Science Council, 2009). Despite the controversy about the coverage of the index and the relevance of the citation rate to academic quality, TSSCI has become a key indicator widely used by HEIs to assess the research performance of their faculty members working in social sciences in Taiwan (Chen, 2008; Kuan et al., 2006).

#### **3.4.4 Role Differentiation and Funding Concentration**

To further improve the research capacity of universities in Taiwan, the MOE launched special grant schemes aiming to facilitate the selected universities to improve their research capacity and boost their research profile so as to reach the world-class status. As early as 1998, the MOE and the NSC jointly launched the Program for Promoting Academic Excellence of Universities (Academic Excellence Program), primarily aiming at improving universities' infrastructure and invigorating research (MOE, 2000). Similar to many other places, the Taiwanese government adopted strategic concentration of research funding as a strategy. Therefore, this program supports four research fields, including humanities and social sciences, life sciences, natural sciences, and engineering and applied sciences, each of which has a focus of

investigation (MOE, 2000). In the first round of the Academic Excellence Program, a total amount of NT\$ 4.3 billion was allocated to fund 19 projects—three of which were offered conditionally. The second round of the program was launched and was implemented from 2002 to 2006. There were 148 research project applications in this round and twelve projects had been granted with a total amount of NT\$ 2.1 billion.

After reviewing the various rounds of implementation, the government considers the Academic Excellence Program successful in allowing effective integration of resources to foster cooperation and exchange between outstanding institutions and talented researchers, and boosting research capacity (NSC, 2005). In addition, the Taiwanese government clearly showed its intention of developing world-class universities in the territory. According to the Executive Yuan's objectives set in 2004, at least one local university would be ranked among the top 100 universities within the next decade, and at least 15 key departments or cross-university research centres would become the top in Asia within the next five years (Lu, 2003). In this context, the MOE launched the Program for Aiming for Top University (Top University Program), which primarily aims to achieve the goal of developing a world-class university, in 2005.<sup>13</sup> To achieve this goal, an amount of NT\$ 50 billions has been budgeted for this five-year long program. Twelve research universities were selected to be funded.<sup>14</sup> They were required to complete a five-stage process ranging over the funding period to maximise their grant.

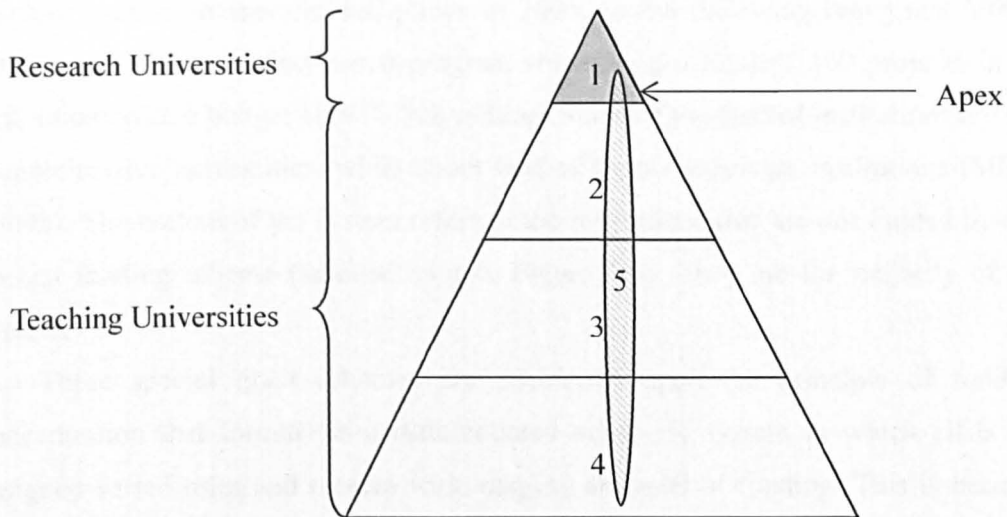
The program has reflected the Taiwanese government's commitment to developing the world-class university. However, it is also criticised that a large amount of funding has only selectively funded a few institutions, but the majority was excluded. More importantly, the Top University Program has formulated a differentiated academic system in which these twelve research-oriented universities have become the apex of the higher education system (labelled as 1 in Figure 3.3).

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<sup>13</sup> The program was originally named the Program for Aiming for First-class University and Top Research Centre. It was also known as the 'five-year-fifty-billion' program.

<sup>14</sup> They are: (1) National Cheng Kung University, (2) National Taiwan University, (3) National Tsing Hua University, (4) National Chiao Tung University, (5) National Central University, (6) National Sun Yat-sen University, (7) National Chung Hsing University, (8) National Yang Ming University, (9) National Taiwan University of Science and Technology, (10) National Chengchi University, (11) Chang Gung University and (12) Yuan Ze University.

**Figure 3.3: The differentiated academic system in Taiwan**



*Notes:* 1. Research-oriented institutions funded by the Program for Aiming for Top University; 2. Teaching-oriented institutions funded by the Program for Promoting Teaching Excellence in Universities; 3. Teaching-oriented institutions funded by the Program for Nurturing Talented in Key Areas; 4. Teaching-oriented institutions without any special funding; 5. The Program for Regional Teaching Resource Centre.

*Source:* Lo, (2009, p. 741).

Although the MOE has allocated a large amount of the budget to promote academic excellence, there was criticism of funding concentration. People criticised that a small number of HEIs acquire most of the government funding; and that weight was too heavily placed on the research capacity of HEIs but their teaching quality was ignored. In response to these criticisms, the MOE launched the Program for Encouraging Teaching Excellence in Universities (Teaching Excellence Program) in 2005. The Teaching Excellence Program aims to provide extra funding to the selected universities to improve their teaching quality through establishing teaching resource centres, developing assessment of teaching, improving student-teacher ratio and reducing faculty members' teaching load. It commenced with a budget of NT\$ 1.2 billion allocated to 13 universities. The amount of funding and the number of funded institutions increased gradually. In 2009, NT\$ 2.2 billion was granted to 31 universities (MOE, 2009a). These teaching-oriented universities are locally prestigious and multi-purposed but not research-oriented. They form the second tier of the differentiated academic system in Taiwan (labelled as 2 in Figure 3.3).



The third layer (labelled as 3 in Figure 3.3) of the tiered system includes the institutions funded by the Program for Nurturing Talented in Key Areas. The Program began as an institution-based program funding 27 institutions to enhance their teaching quality in specific disciplines in 2006. In the following two years (2007-2008), it became a project-based program subsidising a total of 100 projects in 58 institutions with a budget of NT\$ 708 million. Some of the funded institutions are not comprehensive universities, while about half of them are private institutions (MOE, 2009b). The bottom of the system refers to the institutions that are not funded by any special funding scheme (labelled as 4 in Figure 3.3). They are the majority of the system.

These special grant schemes are developed upon the principle of funding concentration that formulates a differentiated academic system in which HEIs are assigned varied roles and receive wide ranging amounts of funding. This is because “research universities are inevitably expensive to operate and require more funds than other academic institutions” (Altbach, 2007, p. 5). Indeed, some countries, such as Germany where such a differentiated system does not exist, find it difficult to support and sustain research universities. Therefore, based on this idea of role differentiation, only a few universities (those located in 1) are identified as research-oriented and the majority (those located in 2-4) are teaching-oriented in Taiwan’s tiered higher education system.

### **3.4.5 Launching Performance Ranking of Scientific Papers for World Universities**

In addition to conducting university evaluation, the HEEACT was also assigned a mission to develop a performance indicator for ranking universities across the world. It therefore has been launching the Performance Ranking of Scientific Papers for World Universities (PRSPWU) to reflect universities’ performance in terms of their research output annually since 2007. The PRSPWU selects the top 700 HEIs listed in the Essential Science Indicators (ESI) and sorts out the top 500 by counting their published journal articles. Different from the THE-QSWUR that focuses on universities’ reputation and the ARWU that includes the number of Nobel Prize Winners affiliated with the institutions, the PRSPWU employs merely data drawn from SCI and SSCI to evaluate universities’ research performance. Eight indicators categorised into three criteria, namely research productivity, research impact and

research excellence, are used in measuring the research performance of universities. Research productivity refers to the number of articles published in SCI and SSCI in the last eleven years (contributing 10 percent to the index) and the number of articles published in the current year (10 percent). Research impact refers to the number of citations within specific time frames determining 30 percent of the index: 10 percent for the number of citations in the last eleven years; 10 percent for the number of citations in the last two years; and 10 percent for the average number of citations in the last eleven years (i.e. the number of articles divided by the number of citations). With regard to research excellence, 10 percent is derived from the h-index of the last two years, 10 percent is determined by the number of highly cited papers in the last eleven years and 10 percent is comprised of the number of articles of the current year in high-impact journals.

As shown in the methodology of the index, the HEEACT considers publishing in international peer reviewed journals as the predominant mode of scientific research output, thus taking statistics on articles published in listed publications as an effective indicator of reflecting universities' research performance. It claims that analyses of SCI and SSCI make global university ranking fairer, with an emphasis on both quality and quantity of publications. It also incorporates average number of criteria in its calculation of the score so as to prevent a predominance of large universities. Furthermore, it takes account of recent research performance in order to make a fair comparison between institutions with different length of history. Since 2008, the HEEACT has been launching a ranking by field by using the same methodology of the overall performance ranking. There are six fields: agriculture, clinical medicine, engineering, life sciences, natural sciences and social sciences (HEEACT, 2010b). Based on these sets of criteria, the HEEACT has analysed the top 500 universities in the world, by continents, and by country. In its 2010 worldwide university performance ranking, institutions in the USA occupy predominant positions in the international higher education landscape. Eight of the world's top ten universities in the table are universities in the USA. As for the performance of Taiwan's universities, only four universities were ranked among the top 500 universities in 2007. The number increased to seven in 2009, but dropped to five in 2010. It is noteworthy that NTU reached 102 and 114, close to the aim of being in the world's top 100, in 2009

and 2010 respectively (see Table 3.4).<sup>15</sup>

**Table 3.4: Ranks of Taiwan's universities in  
HEEACT Performance Ranking of Scientific Papers for World Universities,  
2007-2010**

2007	2008	2009	2010	University
185	141	102	114	National Taiwan University
360	328	307	302	National Cheng Kung University
429	366	347	346	National Tsing Hua University
471	463	456	479	National Chiao Tung University
/	/	479	493	Chang Gung University
/	/	483	/	National Central University
/	475	493	/	National Yang Ming University

*Source:* HEEACT (2010b).

Unlike the ARWU, the PRSPWU dispenses with Nobel indicators and learning researchers, and puts heavier weight on the number of publications in the last two years, but its outcome is not very different to that of the ARWU. In fact, both of them mainly utilise a method of publication counting to measure the performance of universities. It seems to be neutral and scientific, but there are still queries about whether the technologies of publication/citation counts are free from subjective interpretation and are able to reflect the universities performance objectively and comprehensively (Kuan et al., 2006; Marginson, 2009b; Seglen, 1997).

### 3.5 Conclusion

The development of Taiwan's society delineated above indicates that the island has successfully transformed itself to a democratic, post-industrial society, attempting to enter and integrate with the global knowledge-based economy. This rationalises its rapid expansion of higher education in the 1990s and its ambition of developing a world-class university in the 2000s. However, several local factors, like the isolation from international community, the rise of Taiwanese nationalism, and the continuous threats from the PRC, have been constantly influencing Taiwan's higher education

<sup>15</sup> NTU was ranked 95 in 2009 THES-QS WUR.

and have led to the Taiwanisation of higher education after the democratisation in the late 1980s. These trends of internationalisation and localisation have simultaneously affected the development of higher education in Taiwan and have formulated a context, in which higher education is viewed as an instrument to strengthen the academic and economic power of Taiwan so as to help the island-state integrate with the global academic community and economy on the one hand; to defend Taiwan's interest in the more competitive academic and economic environment and to nurture the notion of Taiwan as the homeland on the other. These trends have brought the contextual factors justifying an analysis of the implications of university rankings as a mechanism shaping individual higher education systems and the global landscape of knowledge production for Taiwan. Chapters 5–8 are devoted to that analysis.

## **Chapter 4**

### **Methodology**

#### **4.1 Introduction**

This chapter focuses on the methodology and methods for this thesis. It contains five sections. The first provides a delineation of the research approach and setting employed in this thesis. It explains why qualitative and case study approach was selected for the study. It also elaborates how and why the cases were chosen. The second section describes the methods employed for data collection. The third section is to explain how the collected empirical materials were analysed. The fourth section delineates several ethical principles that were adopted to guide this thesis. The final section acknowledges the methodological limitations of the research approach and some practical limitations of the research methods.

#### **4.2 Research Approach and Setting**

The primary concern of this thesis was to explore how the ranking movement has implicated Taiwan's higher education. As explained in Chapter 2, the issue can be analysed from two perspectives: ecological and geographical. The ecological perspective is mainly concerned with the discussion on the intersubjective account of university rankings in the academic circles. Given that the essence from this perspective was to examine how university rankings can be understood as a discourse in daily practices and dialogues, Schutz's (1972) theory of life-world ("Lebenswelt") provides useful philosophical underpinnings for understanding the ecological dimensions of rankings. According to Schutz, social phenomenology mainly focuses on looking at the ways in which people interpret social phenomena and emphasised the everyday world of lived experience.<sup>16</sup> But, he also argued that the emphasis on

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<sup>16</sup>The lived experience is a term from Husserl, which refers to life experience in which we are all involved. And, we can consider phenomenology as a philosophy or as a research approach (Endress, 2005; Lichtman, 2010).

experience is not equal to subjectivity that is isolated in the individual, but that grows in social relationships. For Schutz, knowing people's experiences through the use of language and other meaningful signs is an effective way of understanding other lives (also see Calhoun, Gerteis, Moody, Pfaff, & Virk, 2007). Analysing people's experience of adopting university rankings in their daily practices and dialogues forms a phenomenological approach, which intends to view the ranking phenomena from the respondents' perspectives, for this study. In other words, the ecological aspects of the thesis sought to describe and interpret the content and nature of lived experiences of the respondents as influenced by university rankings.

As for the geographical perspective, I used Giddens's theory of structuration to investigate the global higher education landscape and Taiwan's higher education system through looking into people's reactions to rankings. For Giddens, "people make society, but are also constrained by it" (cited in Calhoun et al., 2007, p. 221). He believed that action and structure actually are two sides of the same coin and cannot be analysed separately. More importantly, structures are maintained and transformed through action (Giddens, 1976). Based on this understanding, in this thesis, I viewed the global higher education landscape and higher education system as structures that give order to actions of their members but are shaped by interactions between members of the structures simultaneously.

The above philosophical underpinnings show that the overall direction of this thesis points to interpretation rather than causation. Therefore, it is best assessed by qualitative research because the flexibility and responsiveness embedded in qualitative research enable me to offer the prospect of authentic accounts of the complexity of university rankings and its implications for individuals and institutions in Taiwan. As pointed out by Stake (1995, 2010), qualitative research emphasises interpretation. Nevertheless, he also said, "Interpretation is a major part of all research... the function of the qualitative researcher during data gathering is clearly to maintain vigorous interpretation" (Stake, 1995, p. 9). In this regard, "Standard qualitative designs call for the persons most responsible for interpretations to be in the field making observations and make interpretation iteratively" (Stake, 2010, p. 55). Thus, I take qualitative research as:

an effort to understand situations in their uniqueness as part of a particular context and the interactions there... to understand the nature of that setting –

what it means for participants to be that setting, what their lives are like, what's going on for them, what their meanings are, what the world looks like in that particular setting – and in the analysis to be able to communicate that faithfully to others who are interested in that setting... The analysis strives for depth of understanding (Patton, 1985, p. 1, cited in Merriam, 1998, p. 6).

Merriam (1998) further explains that qualitative researchers should be primarily interested in understanding the meaning people have constructed. In fact, qualitative researchers play a pivotal role of interpreting and making sense of the data in the research process (Coffey & Atkinson, 1996). From this perspective, the main purpose of qualitative research is to describe and understand human phenomena, human interactions or human discourse so as to provide the particular meaning and interpretation of a human experience (Lichtman, 2010). In Sherman and Webb's (1988) words, "qualitative implies a direct concern with experience as it is 'lived' or 'felt' or 'undergone'" (p. 7). In this sense, the key concern in qualitative research is to investigate the phenomenon of interest from the insiders'/participants' perspective, not the outsiders'/researchers'; to focus on process, meaning and understanding; to learn about a phenomenon from words and pictures rather than numbers (Merriam, 1998). And, the distinction between researchers and others is less distinctive in qualitative research (Hammersley, 2011). These characteristics of qualitative research sufficiently demonstrate how qualitative methods fit to the present study. Moreover, instead of testing existing theory, qualitative research primarily employs an inductive research strategy that aims to build abstractions, concepts, hypotheses or theories. It inherently aims to condense empirical materials in a way that makes sense from a theoretical and paradigmatic perspective (Alvesson & Kärreman, 2011; Hollway & Jefferson, 2000; Merriam, 1998). Given that theories and concepts concerning university rankings are underdeveloped, qualitative research is seen as an appropriate approach.<sup>17</sup>

Since my research questions are led by asking "how", the case study approach is chosen to carry out my research. As noted by Lichtman (2010), there are three types of cases: the typical, the exemplary or model, and the unusual or unique (pp. 82-83). In this thesis, I used typical case as my criteria in selecting cases. In fact, the selection

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<sup>17</sup> Based on what has been examined in Chapter 2, it is argued that existing literature on Dimension 1 does not generate many theoretical insights, while literature on the other three dimensions (Dimensions 2, 3 and 4) is rather limited.

is based on the differentiated, tiered higher education system, in which universities are classified into several categories, in Taiwan (see Chapter 3). On this basis, I decided to do a multiple case study. I selected one or two universities from a tier of the system, and five in total, as the research sites. The following are the characteristics of these selected universities.

University A is regarded as one of the elite universities located in northern Taiwan with a long history, and students who are accepted to the university are expected to live up to high academic standard. The university is a comprehensive university offering numerous programmes in a diverse range of disciplines, including arts, social sciences, sciences, medicine, engineering, management and so on. It is one of the twelve research intensive universities funded by the Program for Aiming for Top University (also known as the 'five-year-fifty-billion' program), a special grant scheme aiming to facilitating the selected universities to achieve the status of the world's top research universities. To achieve the goal set by the MOE, University A not only identifies itself as one of the flagship universities in the territory, but also aims to become a top university in the world with several academic areas that are internationally well known in the near future.

Located in the central southern part of Taiwan, University B was founded as a comprehensive university, consisting of colleges in various disciplines (arts, social sciences, sciences, management, engineering, management and education) with the goal of enhancing the quality of higher education in the region. Although University B does not attract the elite population that the prestigious universities, like University A, do, the university identifies itself as a research-oriented university and has set an ambitious target to become a globally recognized university. However, it is not selected to be funded by the 'five-year-fifty-billion' program. Instead, University B gained funding from the Program for Promoting Teaching Excellence in Universities, which aims to improve the overall teaching quality of its funded institutions.

University C is located in the town of University B. The university was formed by merging two tertiary institutions (one institute of teacher training and one institute of technology) about a decade ago. After the merger, University C became a comprehensive university offering programmes in different disciplines at both undergraduate and postgraduate levels. While it has secured its leading position at the local level, its vision is to be nationally recognized and even internationally in the long run. University C is regarded as a teaching-oriented university, and receives



funding from the ‘teaching excellence program’. At the same time, it is funded by the Program for Nurturing Talented in Key Areas which aims to sponsor universities to enhance their teaching quality in specific disciplines.

University D and University E have similar backgrounds. Both of them are located in southern Taiwan, and were institutes of teacher training before becoming universities in the early 2000s. Currently, both universities are comprehensive universities consisting of several colleges in different disciplines. Nevertheless, owing to their strong affinity for teacher training, education studies is a particularly strong subject at the universities. Both universities are regarded as teaching-oriented institutions. Located in a larger town and having a wider variety of colleges and programmes, University D has the intention to compete with universities at the upper levels of the system, like University C, via strengthening its research capacity. University E however is keen to remain in its position of serving the local community as a teaching-oriented university. Both Universities D and E obtain funding from the ‘nurturing talented in key areas program’.

It is believed that this mix of universities would provide a glimpse into the life of Taiwan’s higher education. University A is selected because of its prestigious status in Taiwan and its mission of becoming a world-class university. Universities B and C represent mid-level HEIs that are not included in the group of the elite universities, but have the ambitions to compete with their counterparts at the upper levels. Universities D and E are included for identifying the effects of university rankings on HEIs that primarily aim to serve the local community and are considered to be less competitive globally. This selection of research sites did not include every type of HEI in the island-state, but the institutions did vary in terms of academic prestige, size, research- vs. teaching-oriented position, and locally- vs. globally-focused status.

## **4.3 Research Methods**

This section provides a delineation of the methods used and the reasons for including each in the study.

### **4.3.1 Literature Review and Documentary Analysis**

The thesis relies on literature review and documentary analysis for data collection.

Sources of the literature in this study included books, journal articles and other commentaries. They helped identify the research topic through synthesising the existing ideas and information (Lichtman, 2010; Neuman, 2011). They also provided important conceptual and empirical elements to form the theoretical basis and analytical framework of the thesis. Besides, the existing literature, especially on theories in qualitative research, was essential for the planning and design of my fieldwork (Mitchell & Cody, 1993).

Apart from academic literature, secondary data from official documents was an important source of information in this thesis. Indeed, documents are commonly used in social study. A wide range of resources can be addressed as useful documents, including official reports, official statistics, laws, regulations, yearbooks and journals, in this study (MacDonald, 2001). In accordance with Weber's (1968) classification, documents can be divided into two categories in terms of the authorship, i.e. personal and official. Official documents then can be further categorised into state and private ones. In this thesis, I mainly used official state documents as sources of secondary data. To be specific, policy statements, statistical reports, consultation papers, legislations, yearbooks, and websites produced by the MOE on higher education policies and reforms in general and on the pursuit of excellence in higher education in particular are central to the data collection in the analysis of the geographical dimensions. Documents published by the two relevant agencies, the HEEACT and the National Science Council (NSC), were incorporated as well. In regard to the ecological dimensions, documents prepared by the five universities were selected as cases and their departments, faculties and administrative units were also considered as useful sources of information. Many of these documents are openly published, and therefore can be accessed easily through searching in libraries and on the Internet. Internal documents of individual institutions were accessed through personal networks.

To gain the empirical evidence, documents were analysed and evaluated critically. Scott (1990) develops a comprehensive set of appraisal criteria, namely, authenticity, credibility, representativeness, and meaning, for assessing documentary sources. Briefly, authenticity concerns the soundness of a document. It advocates researchers to pay attention to the versions of a document. Credibility involves two aspects, sincerity of the author and accuracy of the document. The former reminds the researcher to address the context in which the documents were prepared, while the

latter requests the researcher to rest on primary data, if possible. Representativeness then refers to the degree of a document being representative of the totality of relevant documents. It is realized that some documents are restricted to public access. To overcome this, the researcher can only rely on his expertise in the selection of the available documents. Finally, the idea of meaning requests the researcher to understand the author's intention and the social context in which the document is written. All these were taken as the principles for documentary analysis in the present study (MacDonald, 2001). Furthermore, interpretation of documents also lies on the phenomenological principles stated in the previous sections.

#### **4.3.2 Interview**

Interviewing is used as the major method of collecting primary data in this thesis. Indeed, interviewing is the technique that is widely used by qualitative researchers to obtain diverse ideas from different correspondents so as to reflect their individual experiences and perspectives. As Marshall and Rossman (2006) put it, through interviews, "the researcher explores a few general topics to help uncover the participants' views but otherwise respects how the participants frame and structure the responses" (p. 101), thereby unfolding the phenomenon as the participants view it. In addition to helping to see things from the members' point of view and providing an account of their experiences, an interview also provides the researcher with the possibility of exploring matters in depth. And, the researcher has the opportunity to check that he or she is understanding the interviewee correctly through immediate follow-up and clarification (Denscombe, 2007; Marshall & Rossman, 2006).

Denscombe (2007) believes that an unstructured interview is more suitable for phenomenological study because it allows interviewees to move the conversation to areas that they regard as significant. However, for practical reasons, it is less feasible to conduct a long interview with every interviewee. Therefore, the interviews are designed to be semi-structured and are guided by a series of questions (see Appendix B for the interview protocol). Yet, to offer space for the interviewees to express their insights and experiences freely, the conversation may not be stuck only on the questions set.

I used purposeful sampling instead of random sampling as the approach of selecting interviewees in this thesis. According to Babbie (2010), purposeful sampling is a way of selecting a sample based on the researcher's knowledge of the population,

its elements and the nature of the research aims. Given the fact that only a small subset of a large population was identified and studied in a case study, purposeful sampling allows interviewees who can best meet the purposes of the research to be selected (Bailey, 1994). Therefore, this sampling method is strong and practical in a sense that it can somewhat assure that the cases selected are “information-rich for study in depth” and provide data related to “issues of central importance to the purpose of the research” (Patton, 1990, p. 169).

A total of 23 semi-structured interviews were conducted to gain an in-depth understanding of the participants’ perceptions and experience of rankings and related issues. Three to five participants were chosen from each of the five sampled universities. To provide a comprehensive account of experience, the participants include one to two academic managers (i.e. faculty deans, associate deans and department heads) and two to three faculty members from each sampled institution (Table 4.1). All these participants were from departments of social sciences. The reason for focusing on social sciences is that academics from these areas are heavily hampered by language barriers and contextual background in the pursuit of world-class excellence. In this sense, the global ranking systems, which stress international reputation and/or publishing research results in international outlets, become a challenge to academics from social sciences in non-Western, non-English speaking regions (see UNESCO, 2010). In addition to the five sampled universities, the HEEACT is an agency which is considered to be highly relevant to the study. Hence, I also interviewed a research fellow from the HEEACT.<sup>18</sup> The details of the interviewees are listed in Appendix C.

**Table 4.1: Interviews by type of respondent’s affiliation**

University	Type of institution	No. of interviews	<i>No. of academic managers</i>	<i>No. of faculty members</i>
A	First Tier	5	3	2
B	Second Tier	5	1	4
C	Second Tier	3	1	2
D	Third Tier	4	2	2
E	Third Tier	5	2	3

*Notes:* Five faculty members are directors of research units affiliated to their departments/faculties

<sup>18</sup> The research fellow (H1) also serves as associate professor in a university, not any of the five sampled universities.

With regard to the recruitment of the interviewees, potential informants were shortlisted through my existing network. Requests for interview were sent by email. Interviews were recorded with informants' consent and full transcriptions of the interviews were produced based on the audio records and field notes. The translation was kept to a minimum to prevent losing the original meaning and the context of the sources.

The interviews lasted from 35 to 75 minutes. The average length was about 45 minutes. This length provided sufficient time for the interviewees to raise issues that they feel important. Face-to-face communication and one-to-one approach was adopted to make sure that interviewees were free from influence from other participants, and that I was able to make follow-up questions and clarify points made by the interviewees. Face-to-face communication also allowed me to gain additional information through observation.

#### 4.4 Data Analysis

In qualitative research, analysis is a process during which the researcher sorts, describes, interprets, organises and structures the data collected from diverse sources in order to make sense out of it and to present the findings to others (Marshall & Rossman, 2006; Stake, 2010). To make the analysis more efficient and effective, a graphic plan for preparing the assembly of the collected materials, including interview transcripts and documents, was developed to facilitate the sorting and interpretation. The assembly plan for data analysis is shown as Figure 4.1.

**Figure 4.1: Assembly plan for data analysis**

Document / interviewee	Page no. of the document / transcript	Dimension	Theme	Quote / impression

The data were sorted manually, for themes rather than precisely predefined

variables. The sorting scheme derived from broad themes (e.g. the effects of funding concentration, the culture of competition and attitudes toward teaching and research) of the corresponding dimensions (i.e. Dimension 1–4). The focus of the analysis is to understand the meaning, context and variations in how salient themes are expressed or ignored to identify general trends that appeared relevant to the effects of university rankings.

## **4.5 Research Ethics**

Research ethics are important in social research. Lichtman (2010) identified ten principles of ethical conduct as guidelines for qualitative researchers. These principles require the researcher to be sensitive to: safety of researchers and participants; privacy and anonymity of participants; confidentiality of information obtained; informed consent prior to conducting research; rapport and friendship with participants; intrusiveness to participants; inappropriate behaviours; data interpretation; data ownership and rewards; and other ethical issues (Lichtman, 2010, pp. 54-58). While I recognised that all these principles are important and apply to this thesis, I paid particular attention to several of them. The first is anonymity. In this thesis, I followed the rules of strict anonymity. Therefore, individual respondents and their affiliations were anonymised before transcription began. Names of the informants were detached from transcripts and each of them was given a unique code. Confidentiality is the second key concern. To keep the data I obtained from the interviews confidential, the data collected was solely for research purposes. I also adhered to procedures for data, storage, security and archiving. Audio records and transcripts of the interviews were stored in password protected computers. Thirdly, all the respondents were well informed before the interviews. As said, interviewees were invited to participate in this research via email. They participated in the study voluntarily. A consent form was presented to all participants. It was explained orally and signed by the respondents prior to the interviews. Lastly, as this thesis was grounded on data interpretation, I was sensitive to the potential pitfalls of over-interpreting or misinterpreting the data I collected in the fieldwork.

## 4.6 Limitations

Several limitations concerning the research approach and methods employed in this thesis are acknowledged here. First of all, the limit of having a controlled trial is recognised. In this thesis, I realised that it is possible for the respondents to conform to a particular disposition or temperament. Indeed, faculty members' views about the impacts of rankings are possibly biased by their negative attitudes towards evaluation. Nonetheless, since a qualitative research is to provide a holistic treatment and narrative account of complex social phenomena rather than a cause-and-effect explanation (Stake, 2010), the possible biased views are incorporated as part of experiential accounts of the phenomena.

In addition, I realised that the findings of this thesis are not generalisable. Indeed, non-generalisability is seen as a limit of qualitative research, in terms of having a representative sample in social research (Ercikan & Roth, 2009; Lichtman, 2010).<sup>19</sup> Thus, while the fieldwork took place in several cities in Taiwan, this cohort did not represent a representative sample from the Taiwanese higher education sector. However, the range of respondent's affiliations represents certain degrees of separation that accounts for scattered minds and thoughts in the stratified system. Indeed, qualitative research emphasises particularisation over generalisation (Stake, 2010). Therefore, while this study is set to be a small-scale research that primarily aims to explore and learn from the perspectives, experiences and understanding of the participants regarding the themes of concern, it is obvious that it does not intend to generalise the findings to the entire higher education sector in Taiwan. Nor does it intend to claim that the findings are representative of situations in the island state.

Apart from methodological limitations, there are several practical limitations of my fieldwork. Firstly, private universities were not selected as my cases. This was because the selection of my research sites was based on the stratified and differentiated academic system imposed by the special funding schemes (Lo, 2009). The distinction between public and private institutions was not a primary focus in the investigation. However, I recognised that interviewing faculty members from private universities could more precisely reflect the function of rankings as an information

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<sup>19</sup> There are different views on this issue. For example, Eisenhart (2009) believed that generalisations from qualitative research are possible. And, Beck and Wu (2009) considered meta-analysis as an effective way of overcoming non-generalisability of qualitative research.

and marketing tool in the trend of commercialisation of higher education. Second, limited access to information is seen as a practical limitation in this study. As for collecting documentary data, limited access to internal documents in the sampled institutions is an obstacle to investigating the situations of individual interviewees and their affiliations. Regarding the collection of interview data, lack of opportunities to interview staff members in relevant government departments and statutory agencies (such as NSC and HEEACT) probably constitutes a significant limitation in the study. As a consequence, the official views were underrepresented. Fortunately, while my requests for interviewing personnel from the MOE and NSC were denied, I managed to interview an affiliated member of the HEEACT as a compromise. Finally, the fieldwork did not include interviews with students, although student decisions were an important issue to be investigated in the ranking phenomena. I decided not to interview students because the focus of this thesis was on academic capital and hierarchy, which is more relevant to faculty members' views. In addition, interviewed faculty staff were asked to comment on this issue, and overseas empirical materials could be found in the existing literature (for example Bowman & Bastedo, 2009; HEFCE, 2008; Thakur, 2007). Nevertheless, studying student decisions in relation to university rankings in Taiwan is an area for further research.

#### **4.7 Conclusion**

This chapter has discussed the methodology and methods employed in this thesis. It adopted a qualitative approach for describing and interpreting the ranking phenomena in Taiwan's higher education. The empirical materials for this thesis were collected from field visit and interviews, together with intensive literature review and documentary analysis. 23 interviews were conducted with academic managers (deans, associate deans, department heads) and faculty members. A list of the interviewees is provided in Appendix C. The findings derived from documentary analysis and interviews will be reported and examined in Chapters 5–8. These empirical materials will also be used to develop the theoretical and paradigmatic perspectives on understanding the ranking movement in Taiwan.



## **Chapter 5**

### **Dimension 1: Influence of University Rankings on National Policy, University Governance and Individual Behaviours**

#### **5.1 Introduction**

This chapter draws on Dimension 1 in the four-dimensional framework to look at how rankings of higher education institutions have influenced stakeholders in the higher education sector of Taiwan. It examines the impacts of university rankings on Taiwanese higher education at systemic, institutional and individual levels respectively. As for systemic level, it discusses how the allocation of resources was altered in response to the prevalence of university rankings. It then turns to investigate how HEIs in Taiwan used rankings as a tool of quality assurance, and the extent to which university rankings intensified competition between universities in Taiwan. In regard to individual level, the chapter focuses on why faculty members had to abandon their teaching duties under the climate of competitiveness and achievements brought by rankings. Lastly, the chapter also examines the influence of university rankings on students' choice on the island.

#### **5.2 Impacts on Policies and Systemic Arrangements**

##### **5.2.1 Resource Allocation**

One important impact of rankings on the systemic level is strategy in resource allocation that has been changed to encourage HEIs to refocus their activities, especially to improve research quality, thereby gaining better ranks in league tables (Altbach, 2007; Marginson, 2007a). Truly, many countries where government is the key funder for education have adopted the policy of concentration of research funding as the strategy to sustain or even strengthen the research capacity of their university sectors. However, as pointed out by Vaira (2009), in the UK, there is a “rankings movement” synthesising institutional rankings and hierarchies, quality assurance and

policy of concentration of funding, thereby strengthening the tendency towards systemic convergence and institutional differentiation. Such a trinity of rankings, evaluation and financing facilitates the system's stratification and, in turn, leads to a situation in which limited government funds are concentrated on funding several leading universities to sustain a critical mass of research excellence that drives up quality in higher education and ensures the country is globally competitive (Adams & Gurney, 2010; Russell Group, n.d.).

Similar to the above circumstances, in Taiwan, HEIs are to be funded differentially, based on quality wherever they are located. In this regard, pursuing higher ranks in international league tables is closely connected with the policy of funding concentration because rankings are considered to be a symbolic and powerful indicator to prove the standard of universities (Ewell, 2008; Lynch, 2006). Hence, as mentioned in previous chapters, the Taiwanese government clearly stated its aim of building a world-class university ranked among the top 100 universities in the world within ten years, and of developing elite departments or research centres in different areas of specialisation within five years. It drew up the Program for Aiming for Top University which was designed to promote research excellence and internationalisation in Taiwan's higher education sector. Under this program, the MOE set aside NT\$ 50 billion within five years (2006-2010), with the prospect of an additional NT\$ 50 billion being provided for a further five years (2011-2015) (Table 5.1). Table 5.2 lists the details of the grants to individual institutions.

**Table 5.1: Budget for the Program for Aiming for Top University**

(Unit: NT\$ billion)

<b>Phase one (year)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Total</b>
Total budget	10	10	10	10	10	50
World-class university program	3.5–6	3.5–6	3.5–6	3.5–6	3.5–6	17.5–30
Top research centre program	4–6.5	4–6.5	4–6.5	4–6.5	4–6.5	20–32.5
<b>Phase two (year)</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
Total Budget	10	10	10	10	10	50
World-class university program	3.5–6	3.5–6	3.5–6	3.5–6	3.5–6	17.5–30
Top research centre program	4–6.5	4–6.5	4–6.5	4–6.5	4–6.5	20–32.5

Source: MOE (2010d).

**Table 5.2: Universities funded by the Program for Aiming for Top University**

(Unit: NT\$ million)

Institution	Phase one <sup>1</sup>	Phase two <sup>1</sup>
National Taiwan University	3,000	3,000
National Cheng Kung University	1,700	1,700
National Tsing Hwa University	1,000	1,200
National Jiao Tong University	800	900
National Central University	600	700
National Sun Yat-sen University	600	600
National Yang Ming University	500	500
National Chung Hsing University	400	450
National Chengchi University	300	200
National Taiwan University of Science and Technology	300	200
Chang Gung University	300	200
Yuan Ze University	300	/

*Note:* (1) The numbers refer to the annual grant offered by the MOE to these institutions.

*Source:* Department of Higher Education (2008).

As stated in the blueprint document, the program provides financial support to the twelve participating universities on specific areas,<sup>20</sup> including school operational management and organisational implementation systems; infrastructure; teaching; academic production and R&D; industry-academia cooperation; and internationalisation. The main objective of the funding provided under the program is for the purpose of upgrading the basic overall facilities of schools. The MOE specified that the funding can be used to improve or upgrade facilities for books for university teaching and research, construction, and conducting international academic exchanges. The participating universities can also use the fund to employ extra staff, including distinguished scholars, experts, technical staff and post-doctoral research fellows from Taiwan and overseas (MOE, 2010d). By enhancing both the research capacity and international standing of Taiwanese universities, the MOE expected that the ‘five-year-fifty-billion’ program would help to increase the number of Taiwanese university graduates going on to research universities to undertake post-graduate research. The MOE hopes that 10 percent of university graduates will go on to

<sup>20</sup> Yuan Ze University had been deregistered from the second phase of the program, but has been granted NT\$ 90 million by the Program for Subsidising Key Areas with Characteristics. There are three other institutions (National Taiwan Ocean University, Kaohsiung Medical University and Chung Yuan Christian University) being funded by this program.

undertake post-graduate research in Taiwan's research intensive universities. Participating universities are also expected to increase their undergraduate numbers by 5 percent each year during the program, and to increase their international students to at least 5 percent of their student population. Furthermore, the MOE also believes that the 'five-year-fifty-billion' program will benefit other non-participating universities through inter-institutional exchanges and collaboration, as well as through developing the models for teaching, research, internationalisation and establishing world-class research centres (Lawson, 2008).

Those who oppose such a policy of concentration of funding argued that the policy is unfair to the HEIs that are not funded by the 'five-year-fifty-billion' program. For instance, a head of department from University E, a non-prestigious university, criticised that the 'five-year-fifty-billion' program is a "wrong policy". She remarked:

When the policy was under review, the government also found that the program was not very successful. There was waste of resources in the 'five-year-fifty-billion' program. Over NT\$ 100 million was spent on purchasing toner.<sup>21</sup> I think the MOE should encourage a diverse range of universities developing themselves with their specific missions, instead of concentrating resources on several universities. In fact, these universities are similar. I believe these universities should have some advantages over others. But, we should not put all the funds and good things on them, and other universities were abandoned. I think this situation is unfair (E5).

A head of department from University B, a mid-level university, also pointed out that the emphasis on performance in rankings has substantially reduced government's financial support to his university. He said:

University B was not selected to be one of the participating universities in the 'five-year-fifty-billion' program. Its funding therefore is relatively less. National Cheng Kung University for example is able to spend millions to hire overseas visiting scholars helping the university enhance the visibility of its research works. However, University B is not capable to employ overseas visiting scholars because its funding has now been reduced. Consequently, the strong get stronger

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<sup>21</sup> The Control Yuan, the auditing branch of the ROC government, launched a report in March 2010 criticising that several universities funded by the 'five-year-fifty-billion' program had spent NT\$ 117 million on buying printer ink and laser toner (Control Yuan, 2010).

and the weak get weaker (B1).

He further criticised that the short sightedness of the government was the cause of the policy:

They (officials of the MOE) bring several universities into the so-called world rankings. For them, this is a way of demonstrating that they had achieved good policy results. I believe, if National Taiwan University (NTU) became one of the top 50 in the world, they would heavily reward it. This explains why they concentrate the government funds on NTU, National Tsing Hua University and National Chiao Tung University. They want quick success and instant benefit... This is their way of thinking (B1).

This view was strongly echoed by two interviewees from University D, a non-prestigious university:

Policy makers need to face election. They therefore have to work with short-term plans and need to seek quick results. Funding must bring an effect shortly. A long-term plan is useless because they would leave the positions after a few years (D1).

Many things in Taiwan are politically oriented. Some government officials might have visions, but their visions would disappear when they sit in the parliament (D2).

Nonetheless, a dean of faculty from University B elaborated the connection between funding concentration and university ranking in a rather positive way:

They (government officials) work tactically. Becoming the world's top 100 is a form of instant success. It provides an indicator for achieving results within a short period of time. A university however needs people who are committed to its long-term development. Money may attract good people. But, if these people are not committed to the university's future, they would eventually leave. Nevertheless, in the short run, the government needs to emphasise university rankings (B2).

An assistant professor from the same university had some observations about how university rankings have influenced higher education policy under the political circumstances of Taiwan. He noted:

These so-called global university rankings have captured the media's interest, and then the media reports have attracted the government's attention. The media might criticise that the performance of individual HEIs was bad in rankings, in terms of effectiveness or accountability. Then, the government would intervene. There was the example of National Chengchi University (NCCU) whose performance was poor in a ranking. NCCU certainly felt upset. But MOE was criticised as well. The media would blame the government on the poor performance of HEIs in rankings. Meanwhile, the government would use rankings to pressurise HEIs into accepting reforms. Apparently, the 'five-year-fifty-billion' program is an example. But, there are other policies affected by this circumstance. I would not say that it is all about rankings. Yet, going up or down in league tables would probably exert an influence on the government. The media is free to criticise the government in Taiwan. If the HEI's performance was poor in rankings, the government would be under lots of pressure. In this sense, I think rankings have direct impacts on policies (B3).

These views are important in terms of confirming the point about the interaction between rankings and public pressure on higher education policy (Salmi & Saroyan, 2007). No matter the rationale, the new mode of objectifying academic excellence and the related policy of funding concentration would deeply affect the domestic academic hierarchies. In this regard, respondents from University A, a prestigious university, had concern about the status of their university. According to a department head:

Although University A is traditionally one of the key universities in Taiwan, it needs to follow the trajectory. If it does not follow the trail, its resources might be taken by other universities. Then, University A would become an inferior in the competition within the country (A1).

From his opinion, being included in the world's top 100 is given a meaning that attributes competition for resources and status to the position of a university in rankings. His view reflects that university rankings have become a crucial factor in

the competition among HEIs for funding.

Indeed, an academic, who served as a research fellow at HEEACT, also remarked about the effects of ranking on resource allocation she had witnessed:

When the Taiwanese government started to allocate the NT\$ 50 billion grant, there was a question of who should be funded. Global ranking had gradually played a role in resource allocation because we needed to provide evidences. We needed to allocate the resources on the basis of evidence. Global ranking then became a mechanism. It certainly cannot represent everything. But, it can show that an institution had advantage over the other players. Therefore, being ranked in a league table became very important (H1).

These responses project the anticipated gains and losses in such a system of zero-sum funding. More importantly, they extend the analysis of university rankings to the politics of education in the island state. In fact, the political developments, educational autonomy and performance culture are interrelated in Taiwan. As I have argued elsewhere, the political circumstances have substantially affected Taiwanese higher education policy (Lo, 2010a). Taiwan's democratic transition plays an important role in motivating different social sectors to participate in higher education governance. On the one hand, this has led to a more decentralised framework of governance, in which individual stakeholders, especially faculty members, exercise more autonomy. On the other hand, higher education policy needs to be more responsive and accountable to the society. Therefore, I argued that "to compete for a total amount of NT\$50 billion in research grants, competition between universities has intensified" (p. 134). "In line with the theme of pursuing "world-class" status, climbing the global university rankings has become an important mission of many renowned universities in Taiwan" (p. 134).

This illustration of a blend of performance culture and the notion of decentralisation demonstrates the situation of higher education governance in democratised Taiwan. In this sense, university rankings provide the function of performance appraisal of universities allowing the government's funding mechanism to become more mission- and performance-based. It is suggested that there is a certain degree of pragmatism in Taiwan that tries to combine and balance the external trends and requirements (i.e. global ranking exercises) and the internal pressures (i.e.

democratic elements in higher education governance). The quotations from the interviews confirm this argument. It is clear that democratisation and the associated deregulating reforms have increased both institutional and individual autonomy, but all of these were within a condition based on political responsibility and sensitivity.

## **5.3 Institutional Responses to University Rankings**

### **5.3.1 Quality Assurance**

As mentioned earlier, a “ranking movement”, which commenced with the introduction of the Research Assessment Exercise (RAE) in the UK, links quality assurance and ranking exercises together to promote a performative work culture. As Vaira (2009) explained:

Although the RAE evaluations were not, and are not intended to give rise to institutional rankings and hierarchies but just to ratings, in a short time they were socially – and to some extent politically – transformed and reconstructed in terms of rankings... It is worth mentioning here that this quality measure and the rankings it generates are based on institution capabilities, which is a typical feature and activity of universities (p. 143).

We have identified similar developments, which simultaneously use rankings and evaluations to encourage performativity that emphasise rigorous scrutiny and assessment, in Taiwan. In fact, while Taiwan has adopted a sophisticated evaluation mechanism that has been run by HEEACT since 2005 (as discussed in Chapter 4) (Chen & Lo, 2007; Hou & Morse, 2009), the statutory body also launched the PRSPWU, an international ranking to compare the performance of HEIs at a global scale. The dual role of HEEACT in assessing HEIs in Taiwan and developing performance indicators for ranking universities across the world somehow reflect that the Taiwanese authorities intended to encourage performativity, despite there being no direct link between the two separate assessment exercises.

As pointed out by Hou and Morse (2009), quality assurance in Taiwanese higher education was generated in the context of growing pressure toward quality within and beyond borders. As for the pressure within the border, the government and the general public have been paying more and more attention to the quality of higher education



after the accomplishment of the massification of higher education (pp. 49-50). On the international front, the increasingly intense and international competition between HEIs has forced both the Taiwanese government and universities to adhere to established paradigms and themes in the global academic community (pp. 51-52). Consequently, on the one hand, as discussed earlier, the Taiwanese government adopted the global ranking project as a tool for funding allocation. On the other hand, according to Hou and Morse's (2009) observations:

more and more Taiwan institutions are using the performance indicators of the annual ranking reports as a tool of self-enhancement and changed their institutional policies in some aspects in response to the ranking... Besides, some schools attempted to reallocate resources and revise the faculty reward system in order to improve their weaknesses in the indicator of research output. Some formed a task force to make short-term and long-term strategies on how to achieve the designated rank several years later (p. 64).

Based on this, they concluded that ranking "is now also an accepted component of an external tool for quality assurance" (p. 48).

To some extent, findings from the interviews confirmed the above arguments. In the interviews, respondents were asked about how university rankings impacted on their institutions. A dean of faculty from University D noted that the direction of development of his university was heavily based on the criteria used in university rankings. He went on to explain that when the institution was an institute of teacher training, the faculty members could focus on teaching only. But, the university had now become a comprehensive university and needed to look for better performance in both ranking and evaluation. It therefore required the faculty members to put more effort into research (D3). A dean of faculty from University E also stated:

There is competition in the society. Thus, HEIs should use rankings to prove themselves and improve their performance. It is not only that outsiders can look at the internal situation of a university, but also that the university can understand itself... Universities can use this opportunity to make self-improvement. Indeed, many indicators used in evaluation might be used in rankings in the future. There are integrated parts of evaluation and university ranking... The indicators and standards used in rankings indicated the areas that universities should work on.

Of course, there are numerous ranking and evaluation agencies using different standards and indicators. Hence, universities needed to recognise the criteria their evaluation agency used to assess them, and to decide which rankings they wanted to work on (E1).

These views reflect that some academics saw university rankings and evaluation as a package of assessing performance of HEIs. There is a response from the HEEACT member further explaining the connection between the two:

It is not all about rankings. Evaluation is relevant as well. Both ranking and evaluation impact on higher education in Taiwan... However, evaluation provides lots of accessible information on performance of HEIs for ranking agencies to develop league tables, as the data has been collected. Certainly, evaluation involves more aspects (than ranking does). But, when a more comprehensive database had been developed, the information would gradually become composite indicators for ranking universities (H1).

These views reflect that some academics saw ranking and evaluation as a package of assessing performance of HEIs. They somewhat show that criteria and indicators used in ranking and quality assurance exercises become an important consideration in the development of institutional policies. Moreover, though there are different criteria and indicators, research performance has dominated the discourse of the pursuit of quality and excellence. Apparently, this is because research performance is adopted as a criterion in almost every ranking system and as a dominant one in some (e.g. ARWU and PRSPWU). Thus, research performance becomes a major criterion in evaluation of faculty member's job performance in some universities. In the five sampled universities, four used research performance to be a criterion to assess their faculty staff. In University A and B, research reached a great weight of 60 percent in faculty members' performance appraisal, while research received a weight of 40 percent in Universities C and D. Only University E did not put an emphasis on research in the performance appraisal for faculty staff.<sup>22</sup>

It is clear that University A is a research-intensive university and hence intends

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<sup>22</sup> In University E, faculty members' performance appraisal mainly takes teaching and services into account. The faculty member could decide whether research performance is included as a criterion in their performance appraisal or not. In other words, research duties are optional.

to place research in an important position. A respondent from University A expressed that although teaching occupied 30 percent of weighting in assessing the faculty's performance, research actually was the predominant criteria in the evaluation (A2). However, a respondent from University C also reflected that her university had heavily stressed the importance of research, despite the fact that 60 percent of weighting was assigned to teaching and services in the documents (C3).

According to a respondent, some universities adopted a scoring system in which a faculty member would score 40 points by publishing an article in a SSCI journal and 20 points for a paper in a TSSCI journal. Faculty staff needed to have at least 240 points for being promoted from assistant professor to associate professor. Some universities even offer financial incentives to encourage faculty staff to be more productive in research activities. He noted that the faculty staff in his university would be rewarded differentially, based on the publication outlets they had published in. He specified:

It is not about SSCI only, but impact factor is also taken into consideration. It is like a subsidy or an award. If you published in top 15 percent of SSCI journals, as I remember, you would gain NT\$ 40 or 60 thousand. If your publication was ranged from 15 to 40 percent in the journal list, the amount would be lower. If it was below 40 percent or it was a TSSCI journal, you would gain NT\$ 20 thousand. This is a rewarding mechanism in which quantization is put to an extreme level (A2).

The impacts of university rankings on the life in Taiwan's academia will be discussed in more detail below. However, these findings suggest that rankings have substantially influenced institutional policies in employing, promoting and dismissing staff. Nonetheless, as remarked by Harvey (2008), "the predominant focus on the whole institution is also problematic given that universities have particular strengths in one field of activity, such as research or teaching, and weaknesses in others. Or they may even be focused on specific areas, while not offering activities in many other areas" (p. 193). He further stated that the singular standard in ranking is unhelpful in validating various programmes and disciplines (Harvey, 2008). When a head of department commended on the above financial incentive scheme, he had some observations echoing Harvey's view on the sole requirement for different

disciplines:

I have a friend who works in National Sun Yat-sen University. Originally, the university provided a subsidy of NT\$ 100 thousand for publishing a paper in a SSCI journal. But, the university had to lower the subsidy to NT\$ 30 thousand, because my friend had published 10 pieces in a year. The change of the incentive scheme was owing to her. People who study in the field of educational technologies (his friend's field) could produce a paper by slightly changing the data. Therefore, it was not difficult for them to publish ten articles in a year. But, in my field (philosophy of education), people might need to take at least half or one year for writing a proper article. It is possible to spend two or three on writing a paper... You would become short-sighted and would cut your research into small pieces in order to keep publishing one or two papers every year. But, people in my field still needed a longer period, probably three to five years, to finish one publication. However, before you had finished your article and published it, you might have already been considered as one without research capacity. And, this would affect your promotion (B1).

Nevertheless, it is important to note that even though many interviewees reported that their universities put heavy emphasis on having good research performance, there are differences between institutions at different tiers. The response from an interviewee who taught at University A before joining University C is useful to illustrate such a difference. He said:

I was in University A before coming to University C. These are two totally different universities. University A is a research university. University C is a teaching university... In University A, faculty are required to have breakthroughs in their research. But, in University C, it mainly focuses on teaching and spends fewer efforts on research... In regard to faculty performance appraisal, University C adopts a low standard, with which you can be promoted if you have published one SSCI paper. But, University A adopts a high standard that is six times higher than that of University C. It requires six SSCI papers within three years. I taught at both of these universities. I decided to join University C because I was not that competitive in this area (research). I needed much more time to meet the promotion requirements in University A. I think it is impossible for me to write that many papers. That was why I came to University C (C4).

This response reflects that the distinction between research and teaching universities is still apparent in Taiwanese higher education. Based on the above discussion, it is argued that there is a trend that stresses research considerably affecting institutional policies, especially those of evaluating faculty performance, at HEIs from different tiers. And, rankings have significant contributions to the formation of this trend. However, the homogenising effect brought by rankings should not be exaggerated. There are different tracks that universities develop along in the higher education system. This has led to a situation in which HEIs compete differentially for resources and status.

### **5.3.2 Competition**

In the existing literature, university rankings are described as a factor intensifying competition between HEIs that is considered to be unhealthy by some authors. For instance, Stella and Woodhouse (2006) argued that “institutions competing for top rankings may forego cooperation with other institutions, which can be detrimental to the student and the institution as well as higher education in general” (p. 16). Dill and Soo (2005) noted that competition between universities for staff, students, resources and status has become more common both within and across countries, and that HEIs have gamed the rankings through data manipulation. Harvy (2008) also reported that many HEIs have amended their mission statements and other institutional arrangements so as to win the competition.

Findings from the interviews to a certain extent prove these arguments and observations. For example, an associate dean of faculty from University A pointed out that his university attempted to improve its rank in league tables by changing its personnel policies and recruiting more productive researchers. He said:

I think University A has changed tremendously in the recent years. In order to keep up with competition, we stole talents from other universities in Taiwan, or even from Hong Kong. I think rankings provide an objective standard which is the advantage. But, the disadvantage is that rankings have brought a lot of pressures to university faculty...Now we would headhunt those with many SSCI papers. In fact, we recruited several young men who had won awards. They brought credit to the faculty, but also brought competition between colleagues.

Some associate professors had not been promoted for seven to eight years, while some headhunted assistant professors had been promoted to associate professor quickly, and would become professor in the near future (A4).

He concluded that these changes were owing to the single standard used in rankings that merely stressed research outputs in indexed journals, thereby reducing diversity of institutions. Another respondent from University A had similar comments. She has witnessed that many HEIs, including hers and those from lower tiers, put heavy emphasis on producing articles in indexed publication outlets, but ignored their own characteristics (A5). These responses reflect that university rankings have brought a significant change to the institutional environment where faculty members and HEIs compete and compare with each other in very particular and specific areas. As argued by Harvey (2008), ranking brings a loss of freedom and independence for HEIs to control the terms of their success. In this sense, the pursuit of climbing up league tables means “a drift to homogeneity” (p. 195).

However, at the same time, the findings of the fieldwork also suggested that HEIs in Taiwan are competing differentially. University A, as one of the top-tier research universities in the island state, clearly sets out its aim of becoming a “world-class university”. Indeed, there is a response from University A saying that the university identified several renowned universities in the Asian Pacific region to be its benchmarks, against which the university would know how to move forward (A4). A dean of faculty from University A then connected the competition across countries to that within the borders. He said, “Taiwan wanted to integrate with the international community and maintain its international competitiveness. Several universities therefore were selected (to compete internationally). Originally, only two or three institutions were in (the Program for Aiming for Top University)”. But, he explained that eventually quite a few universities were selected because they had different strong areas and characteristics and the MOE wanted them to compete with each other. From a systemic perspective, “if one became the world’s top 100, this might help other institutions enter the world’s top in some areas”, he added (A3).

Based on these responses, it is clear that universities from this tier were assigned to compete with foreign HEIs for reputation and status internationally and with each other for resources domestically. It is reasonable to say that they are the group which is mostly affected by the homogenising effect brought by global university rankings,

because they need to achieve a better ranking to prove and advertise themselves in the competitive environment (Lo, 2009). Nevertheless, it is important to note that although rankings are influential in terms of upholding and developing quality assurance and performativity culture, they are not essentially powerful in affecting the domestic higher education market. As pointed out by a respondent from University A, there is an “established ecology of higher education” in which “every university has its own position that is not easy to be changed”. In this aspect, “the influence of university rankings is limited” (A1). This point will be further elaborated later on in this chapter.

Turning to those located at the mid-level of the system, respondents from this type of university reflected that their universities were keen to compete for a better position in the system. For example, University B saw itself as a research university with the potential to be internationally competitive. It hence clearly stated the goal of being a world-class university on its website. In fact, several respondents from University B believed that performance of their university has been overlooked or underestimated by the government, and deserves to have a better position:

There were eleven institutions being included in phase one (of the Program for Aiming for Top University). Probably, University B was the twelfth or thirteenth. It was marginally excluded from the Program for Aiming for Top University (B2).

We re-elected the president of the university last year. A candidate looked at the performance of different colleges of the university. He found that individual subjects of the university were in the top ten of Taiwan. But, it dropped to eleventh or twelfth, if looking at the overall performance of the university. As I have said, University B has a feeling of grievance. When the MOE decided to fund the top twelfth, University B was ranked the thirteenth. When the MOE decided to fund the top ten, University B was ranked the eleventh. It (funding) always passed closely by University B (B1).

In University B, all people, including the president, faculty, students and staff, clearly know its position of being a research university. We might claim that teaching was important, but we put many efforts on research. Thus, University B worked seriously at every opportunity. We hoped that some time later, we could gain the funding from the Program for Aiming for Top University, instead of that

from the Program for Encouraging Teaching Excellence in Universities (B3).

In contrast to University B, University C has adopted a different strategy to the competition, even though it is also one of the institutions funded by the Program for Encouraging Teaching Excellence in Universities. A dean of faculty from University C explained:

There were limited places in the ‘five-year-fifty-billion’ program. Also, it is impossible for University C to be included in the global rankings at the moment. We aim to compete with the *zhong* group (*zhongzibei*),<sup>23</sup> like National Chung Cheng University and National Chung Hsing University. We see them as our benchmarks... We see the *zhong* group as our competitors, and we focus on the Program for Encouraging Teaching Excellence in Universities. Indeed, we think our teaching excellence project has made some achievements (C2).

Comparing this response with those from University B, it is realised that the differential competition between institutions is based on the special funding programs, primarily referring to the Program for Aiming for Top University and the Program for Encouraging Teaching Excellence in Universities. As examined in Chapter 4, these programs cut the lines between research and teaching, and between international and local in the Taiwanese higher education system (also see Lo, 2009). While the prevalence of global university rankings has pressurised the policy makers into using competition to motivate HEIs in the country, it also helps individual HEIs determine their positions within the higher education sector (Dill & Soo, 2005). As rightly pointed out by a researcher from the HEEACT:

Rankings are important in terms of answering the question ‘who is the winner?’ On this basis, their influences are massive because many universities identify their benchmarks in rankings. They can find the most suitable competitors and know how to improve. This is very important (H1).

In this regard, despite the fact that those mid-level HEIs would not be directly affected

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<sup>23</sup> The *zhong* group (*zhongzibei*) roughly refers to four national universities, namely Central University (中央大學), Chung Hsing University (中興大學), Sun Yat-sen University (中山大學) and Chung Cheng University (中正大學), as their names start with the Chinese character “中” (*zhong*). *Zhong* also means middle in Chinese.



by the international competition and the emergence of the global rankings, rankings have caused an impact on universities in Taiwan across tiers.

Nevertheless, this argument may be less useful to illustrate the situation of the non-prestigious universities, which are not funded by these major special funding schemes. Although most respondents from Universities D and E noted that they face increasing competitive pressures under reforms, many also denied the significance of university rankings in affecting their institutional environment. For example:

Those universities, like Harvard University, National University of Singapore and University of Hong Kong, are excellent. But, it is impossible for us to compete with them. What they are doing is irrelevant to me. I only concern the research and teaching in my university (D4).

I can feel the competition but I think the relationship between the competition and rankings is not strong. For us, competition is more related to employment and destination of our graduates. This is more relevant (E1).

National Taiwan University might care about its rankings. But, I do not think global rankings have any impacts on us because we are not able to be included in the rankings (E5).

However, when a dean of faculty from University D was asked about the effects of rankings on his university, he provided a different view on the issue:

University D has been working very hard. But, it is very difficult for us to be the world's top 100 owing to our limitations. Do global rankings make an impact on University D? Yes, of course. There is stimulation. National Taiwan University and National Cheng Kung University ranked high. We also want to follow their practices. So we would improve ourselves in the areas of research and the number of teaching staff (D3).

This response is similar to those from Universities B and C. The diverse evidence shows that people from Universities D and E might have different expectations on their universities, and suggest that plausibly HEIs from this tier were less influenced by the prevalence of world university rankings.

In addition, on the basis of the responses from the sampled universities, it is sensible to say that global university rankings have generated a competitive culture in Taiwan's higher education, in which HEIs are encouraged to triumph over their particular counterparts. In this study, there is no evidence showing that universities work competitively, instead of cooperatively (cf. Stella & Woodhouse, 2006). However, the special funding schemes and the following competition have brought an effect on the relations and interactions between HEIs. A remark made by an academic teaching at University B reflects the change:

Nowadays, there are three types of universities: institutions funded by the 'five-year-fifty-billion' program; those funded by the Program for Encouraging Teaching Excellence in Universities; and those without any special funding. And, there were traditional categories: general (comprehensive) university and university of science and technology.<sup>24</sup> So, one might ask, "is National Taiwan University of Science and Technology (NTUST) an institute of technology?" Another might answer, "of course not, NTUST's competitors are National Taiwan University (NTU) and National Cheng Kung University (NCKU). How can it be an institute of technology? You are so wrong". This was the effect. NTUST would not identify itself as an institute of technology. It wants to compete with NTU, NCKU, National Tsing Hua University and National Chiao Tung University because now it is one of them. From my view, if this program (the 'five-year-fifty-billion' program) was run for another ten years, the categories of university (in Taiwan) would be totally changed (B3).

This comment shows that the domestic academic hierarchies were under challenge owing to the changing higher education policy and environment brought by the prevalence of world university rankings. To sum up, rankings have brought differential competitions among HEIs that could lead to a (re)stratification of the Taiwanese higher education system.

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<sup>24</sup> Many universities of technology and science, including NTUST, were colleges and were promoted to universities during the expansion of higher education in the 1990s. For details, please see Chapter 4. NTUST is one of the universities funded by the 'five-year-fifty-billion' program.

## **5.4 Reactions and Reflections of Faculty Staff and Students**

### **5.4.1 Research versus Teaching**

There is a predominant culture of pursuing research performance, under the influence of which the educational missions and functions of many HEIs, particularly research universities, have been considerably deteriorating across the world. Lewis's (2006) remark about the educational function of universities illustrates how teaching is threatened by the tendency of emphasis on research in contemporary higher education. He puts it:

Tenure is given mostly for research, in part for teaching, and not at all for interests or skill in helping students become adults. Few of today's professors enter academia as a mission, a noble calling. Of those who do, few survive to tenure at top universities. The pressure to publish a great deal in short time makes academic writing duller; less adventurous, and more technical, since junior faculty members opt to write what they know to be acceptable to the journals and academic presses (Lewis, 2006, p. 8).

With reference to the discussion in the previous sections, it is recognised that the prevalence of university rankings is a very important factor leading to this phenomenon. Given the fact that heavy weight has been placed on research output to measure performance of HEIs in many university ranking systems, like ARWU and PRSPWU, many universities consider research as a key measure to reach higher positions in league tables. As a consequence, as examined above, most sampled universities use research outputs as a major factor in evaluating the performance of faculty members. This section then examines how faculty members view their research and educational duties within the context of performativity culture that stresses "publish or perish".

An assistant professor from University A reflected on how young faculty members from an elite university respond to the performativity culture. He said:

I think there is an overemphasis on research that influences people, like me, who want a promotion. In fact, when I just joined University A, I participated in some teaching skills workshops for new teachers. In the workshops, I was taught how to improve my teaching methods. And, I was willing to participate. But, I need to

say that I am still an assistant professor. If I applied for promotion to associate professor, my research performance counted for 60 percent of the criteria. The rest comprised 30 percent for teaching and 10 percent administrative service. I should focus on research only, if I worked pragmatically. I remember the instructor of the workshop said that teaching is a matter of whole life because students would appreciate it for their whole lives. However, after working for two years, sometimes I would see teaching as a charity because students might think your teaching was good and they could learn more. But, that was all. This would not help my promotion. Only research makes a direct impact on my promotion. One of my colleagues also talked to me honestly. He said that he spent 90 percent of his time on research but only 10 percent on teaching. I think this is a very rational choice... Students would evaluate their teachers and rate them on a scale of 1 to 5 at the end of the semester. Normally, over 4 is good enough. Either 4.1 or 4.9 make no difference for my promotion. Eventually, all are about research (A2).

This response substantially confirms Lewis's remarks. Indeed, other respondents who held higher positions at University A had similar observations. For instance, a professor who held the position of associate dean described the pressure that his young colleagues were facing:

Nowadays, the lives of young faculty members are harder. They would have difficulties to get their job promotion, if they could not publish their papers in SSCI or TSSCI journals and could not get their research projects being funded by the NSC. There is a principle under which a faculty member will be dismissed if he is not promoted in six years. This principle has not been strictly implemented in this faculty, but other faculties have already. I think this faculty will implement as well in two years (A4).

A faculty dean from University A admitted that there is an underlying trend toward overemphasis on research. As explained by him, in response to this trend, there are two different tracks for academic staff: research-track and teaching-track. People who are on the teaching-track can focus on teaching, as 60 percent of their evaluation counts for teaching and the part on research is lowered to 2 percent. He pointed out that this institutional policy allows the faculty to keep people who have excellent performance in teaching but are relatively weak in research. Nevertheless, the salary

and other service conditions of the teaching-track faculty are slightly lower than those of the research-track faculty (A3).

These responses reflect the apparent imbalance between research and teaching in University A, an elite university in Taiwan. However, the phenomenon is not limited to the top-tier research universities. In fact, the Taiwanese government also recognised such a phenomenon of “emphasising research but neglecting teaching” in the higher education sector (MOE, 2010e). It therefore launched the Program for Encouraging Teaching Excellence in Universities to encourage mid-level universities to put more efforts in teaching. The universities funded by this program have formed the second-tier of the Taiwanese higher education system that has a mission of achieving teaching excellence (Lo, 2009).

Nevertheless, according to the interviewees from Universities B and C, research is still very important, sometimes even more important than teaching, in their institutions, despite the fact both universities are funded by the Teaching Excellence Program. When asked about whether teaching has been overshadowed by research, several academics who are yet to receive promotion to rank of full professor expressed their views on the balance between teaching and research:

Faculty members would have pressure before being promoted to full professor. They would tend to focus on research and this might affect their teaching. There are different types of universities in Taiwan. But, many faculty members in those poorly ranked universities would also work on research, although in theory they should focus on teaching. This is because research is an important criterion in job promotion. This pushes faculty members to spend much time on research. This is a trade-off. You have to choose one, instead of making a balance between two (research and teaching), except that you are an extraordinarily capable person (B3).

I tried to divide my time between research and teaching. I roughly spend four days on teaching and three days on research in a week. But I do not think many teachers could do the same because if you are still an assistant professor, your lessons are evenly allocated in the week. Then, you are not able to focus on teaching or research within a period of time. In addition, service is also an area academics need to look after... (Service) includes attending the government meetings and providing counselling to students. Providing counselling is fine by

me because I love my students. But, attending government meetings is a burden to me (B4).

In theory, research counted for 40 percent (in performance appraisal for faculty members), but I think that it was much more important than the ratio stated in the documents. I would say it counted for about 60 percent to 70 percent. Some faculty members might have passions for service and teaching. But, after they had failed to get a promotion, they would decline to take up any additional duties not related to research. They would only teach the subjects they were familiar with. Students are the ones suffering from this situation. When they were organising activities, they could not find an advisor. Teachers would not concern them, even if students needed counselling (C3).

These responses reflect that junior faculty members from Universities B and C also had difficulties finding a balance between research and teaching in their institutions, despite the fact that their universities were assigned to pursue teaching excellence by the government through the special funding scheme.

The same question was asked in the interviews with faculty members from University D. They held slightly different views on the issue, though all four interviewees agreed that there is rising pressure to publish in their university. An associate professor for example noted that there is a phenomenon of “emphasising research but neglecting teaching” in University D (D2). Yet, a head of department mentioned that established faculty members might not care much about research, as they do not have the pressure to get a promotion. By contrast, young faculty members would put a lot of efforts into doing research because it is difficult to perform with teaching. They hence need to publish in order to gain a promotion (D1). Another respondent from the same university who held a position of director of research institute also reiterated that publication is important in job promotion. He however reflected that he would not pressurise his colleagues to publish more, although he would encourage them to do research. He explained:

Some faculty members might tend to focus on research because they wanted to be promoted. It is difficult to get a promotion, if they do not have research projects funded by the NSC and good papers. But, teaching is their core duty. Indeed, my colleagues tend to focus on teaching but do not publish a lot. I hope

there is a balance (between teaching and research)... I would try to let them know (the importance of research), but I would not force them to do research (D4).

In contrast, comments made by respondents from University E are more consistent on this issue. Generally speaking, they denied that faculty members would abandon their educational duties in their institution. These are their responses:

There is no such a phenomenon (of neglecting teaching) in this university. Teaching forms a major part of this institution because we position ourselves as a teaching university. In addition to teaching, research is certainly important. So we also take research as an item in our faculty members' performance appraisal (E1).<sup>25</sup>

I cannot see that faculty members overlook teaching (in this university)... Our teachers have already spent much time to teach the students who were not expected to enter university studies. How could we manage that, if emphasis was put on research? (E4)

We are a teaching university focusing on educational duties. Our primary missions basically are teaching and counselling. Research is optional for faculty members. They could work on any research area that they were interested in. But, teaching and service had already occupied much of their time. Thus, they would not be blamed for low research output. Their time is limited. They would be exhausted, if they needed to strike a balance (between teaching and research) (E5).

Comparing these responses with the analyses in the previous sections, it is apparent that universities located at this tier are not expected to compete for better rankings by performing in research. In this sense, it is argued that academics teaching at these universities are not strongly influenced by the performativity culture because they feel a distance from the global competition. However, research is still an item that catches the attention of some faculty members in these institutions because, as explained by a respondent from University D:

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<sup>25</sup> Research is optional for faculty members in University E.

There are personal considerations. People who were working in private university or institute of technology might want to join national university. Publications are something that can be easily seen... People were interested in things they could take away. Publications are something that can be taken away and contribute to their personal profile. In addition, the current system tends to reward people for research, instead of for teaching and service (D2).

#### **5.4.2 Students' Choice**

As argued by some authors, university rankings are important information tools that students can use as a guide to choose their university (for example Bowman & Bastedo, 2009; Harvey, 2008; Hossler, 1998; Thakur, 2007). Nonetheless, recent studies reported that league tables have a significant impact on international students' decisions but only a limited impact on home students' (Hazelkorn, 2008; HEFCE, 2008; Roberts & Thompson, 2007). Though this study did not involve students directly, the respondents were asked about how much university rankings have affected students' choice in the interviews. This section reports the interviewees' comments and observations on the impacts of rankings on this issue.

As mentioned earlier, University A is an elite university that holds good reputation and stable status in the society. As pointed out by a department head, students and parents in Taiwan heavily rely on reputation as a factor in selecting a university. Therefore, the effects of university rankings on home students' decision are very limited (A1). Indeed, such an observation was confirmed by several interviewees from University A as well as other sampled universities. Another respondent from University A mentioned that rankings might be useful for international students in making a decision. But, the number of international students is still small. They only occupy 5 to 6 percent of the total student population in University A (A4). In this regard, most respondents from University A remarked that university rankings are insignificant in terms of recruiting students and advertising the university.

Nevertheless, a faculty dean from University B reported that the student admission of his university was strongly affected by university rankings in an indirect way. He said that "(students) tended to choose those universities funded by 'five-year-fifty-billion'" and "their parents would strongly advise them to study in these universities" because:



Most parents would consult others if their children were entering university studies. Before making a decision, they might read newspapers. More and more parents would look for information... Universities might not be willing to advise themselves but they were forced to do that. A university must advertise itself, if other universities were doing publicity. There were rankings and comparison. Now there are “five-year-fifty-billion” universities and “teaching excellence” universities. Some of them used these titles to run advertising (B2).

This observation was confirmed by his colleagues. As mentioned by another respondent from University B, students and parents would simplify the information from the media and other advertising channels. He said that some students decided not to choose University B because “it is not one of the ‘five-year-fifty-billion’ universities” (B5). This shows that some universities are using the special funding schemes as a branding exercise to promote their institutions and attract students. His colleague further elaborated that mid-level universities, like University B, would lose good students to top-tier universities because students and parents could be easily influenced by rankings and other information from the media. In response to this phenomenon:

Mid-level universities had worked very hard to perform better in rankings so as to let their customers know their advantages. Some of these universities would claim that they had done better than National Taiwan University in a specific area. They would highlight their advantages (through rankings). So, rankings might not cause a strong influence upon operation and management of HEIs, but they were useful in advertising (B3).

However, turning to the responses from the sampled universities located at lower tiers, many interviewees from Universities C, D and E mentioned that university rankings are not very important for students in making decisions. A faculty dean from University C for example said that it was impossible for his university to be ranked within the world’s top 100. Therefore, global university rankings were rather meaningless to University C, even though the university had been recruiting students from South East Asian countries (C2). A department head from University E also said that though she believed that ranking can be used as an effective marketing tool, her

university was not affected by the prevalence of international league tables because they were inaccessible to her university (E5). A faculty dean from University D explained that “National Taiwan University (NTU) is still the number one in Taiwan, no matter whether it is included in the world’s top 100 or not. Students are glad to enter NTU or National Cheng Kung University because graduating from these universities can secure their future employment”. Therefore, he believed that enhancing the competitiveness of the graduates in the job market is the best way to attract students and parents to select his university (D1). A respondent from University E also connected career prospect with students’ choice:

I think for parents and students the difference between a rank of 235 and 236 was meaningless. Those institutions at the top-tier might look for being the world’s top 100, but for those at lower tiers university rankings are far from them, despite that they might still want to climb up rankings. So, the conventional impression in the local area is still the determining factor. The overall impression of the employers on its graduates and its teaching quality are more important factors (than rankings) affecting parents to decide whether they want to send their children to a university (E2).

Based on the findings from the interviews, it is suggested that university rankings and related government policies, like the special funding schemes, are not essential factors affecting students to choose universities at the top or bottom of the system. For students who are considering these universities, as suggested by Hossler (1998), information from parents, friends and classmates is probably more important than ranking. However, for mid-level universities, although they are yet to be capable of competing in the international higher education market, they are considerably influenced by university rankings and the associated policies because of the “winner-take-all” effect, under which the mid-level universities can lose good students and reputation to the top universities, despite the possibility that the gap between the top and middle is not very significant (Frank, 2001, 2004). This point further explains why University B was keen to pursue a place in the “five-year-fifty-billion” program.

## **5.5 Conclusion**

To conclude, it is argued that the empirical evidence analysed in this chapter somewhat proves the existence or emergence of predominant models in higher education. Specifically, the emergence of global rankings has institutionalised the homogenising forces brought by the globalism and globalising tendencies in higher education (e.g. Englishisation and the “publish-or-perish” culture), by which government policies have been substantively affected, and institutional and individual behaviours have also been altered. Hence, for anti-colonial thinkers, the power that global rankings embody to some extent represents a new form of western imperialism in higher education, which exists and is presented as a discursive phenomenon, in the post-colonial era (Lo, 2011; also see Tikly, 2004; Dei, 2006). From this perspective, while climbing the rankings is interpreted as a way of pursuing the world-class status and quality excellence, the resistance to the dominant models is somehow suppressed. This understanding of global rankings illustrates how the coercive power of league tables is internalised as self-disciplinary forces within individual higher education systems in the discourse of globalisation and internationalisation.

However, the empirical evidence also reflects that the discursive but hegemonic effects of global rankings become rather implicit in lower tiers of the Taiwanese higher education system. If the orthodox conceptualisation of globalisation, which sees local as subordinate to global, is applied in this study, a possible scenario is that the top-tier, research-oriented universities are mobilised by the government policy (e.g. funding concentration) and the lower-tier, teaching-oriented ones are directed not to expand their research capacity, climb league tables and join the global competition through upholding the policy of role differentiation. This interpretation fits into the transformationalist account of globalisation, according to which local factors, especially state capacity and government policy, are still one of the determining variables in the process of policy formulation and implementation (Green, 2007). Nevertheless, recent work also demonstrates an antimony of globalisation, which suggests that “globalisation has created greater segmentation in higher education worldwide, which advantaged some institutions and disadvantaged others” (Cantwell & Maldonado-Maldonado, 2009, p. 304). In other words, while some nations, institutions and individuals are co-opted and benefited by the asymmetric social structure of “global”, the process of globalisation itself can make some others more globally irrelevant. This is particularly true when the concept of globalisation is translated into governance technology. In fact, as discussed, some institutions are

excluded from the governmental processes of globalisation, whilst the current governance practices use global rankings to pursue the global image and world-class reputation. In light of this conception of globalisation in higher education, it is argued that the non-elite institutions and their faculty members interviewed in this study were sacrificed and abandoned, if it is admitted that chasing the leaders is not the only approach to globalising practices. This finding is important in terms of demonstrating the inequality caused by the tendency among governments and HEIs to pursue the world-class status. The inequality issues here not only refer to the uneven allocation of resources or the unfairness of assigning roles and duties within the system, but more importantly the unequal opportunity of accessing the global domain in the global age.

## **Chapter 6**

### **Dimension 2: National Interests in University Rankings and the Global Landscape of Higher Education**

#### **6.1 Introduction**

This chapter explains how university rankings, especially the global ones, can be understood as a mechanism upholding Taiwan's interests in light of cross-national analysis of university ranking and recent discussion on regionalisation of higher education in Asia. This approach formulates Dimension 2 in the four-dimensional framework, which argues that university rankings can be seen as a technology to uphold national interests. To be specific, the chapter suggests that global university ranking can be used as: a governing tool adopted by individual countries to govern their higher education sectors; a zoning technology forming an imaginary line of cultural and academic sovereignty; and a mechanism of agenda setting that affects university strategies and government policies at an international scale in the worldwide higher education.

#### **6.2 The Use of University Rankings in Promoting Taiwan's Interests**

As mentioned in previous chapters, university rankings have a function of visualising the notion of a world-class university (also see Deem et al., 2009; Liu et al., 2011). In fact, we have witnessed a worldwide expansion of higher education in recent decades (Schofer & Meyer, 2005) and, in particular, a higher education massification in some relatively wealthier East Asian countries (Postiglione, 2005). Given the accomplishment of higher education expansion in parts of the region, some of these countries have shifted their attention from quantity growth to quality consolidation in the enforcement of catch-up strategies in higher education. As a consequence, the pursuit of quality excellence and the establishment of quality assurance activities and

mechanisms have entered the discourse of higher education development in a number of countries in the region (Chan & Lo, 2008; Hawkins, 2010). This contextual background rationalises an argument in which global university rankings are considered as a technology used by these peripheral countries to defend or even promote their interests in the global higher education, thereby changing the global landscape of higher education and questioning the core status of Western developed countries in higher education (Murphy et al., 2010; Postiglione, 2005). On this basis, the following sections examine how university rankings can be used to promote national interests with particular reference to Taiwan's situation. As I have outlined elsewhere, it is to suggest that the use of university rankings can be understood in three ways: rankings as a governing tool, as a zoning technology, and as a mechanism of agenda setting (Lo, 2011).

### **6.2.1 University Ranking as a Governing Tool**

As already captioned in Chapter 2, some have argued that global university rankings were used by individual governments as a governing tool to monitor and restructure their higher education sectors. For instance, the Chinese use of university rankings is a useful one to elaborate how the national will can direct higher education systems in the global environment. As pointed out by members of the Jiao Tong Group, one key purpose of the ARWU, which rationalises the emphasis on research performance, is to provide comparable data to enable the comparison of higher education institutions worldwide, thereby finding out "the gap between Chinese universities and world-class universities" (Liu, Cheng, & Liu, 2004, p. 101; also see Shin, 2011). This point reflects that the ARWU was adopted by the Chinese government as a tool for monitoring "the continuing gap in research performance between China and universities in North America, the UK and Western Europe, according to the benchmark of the American comprehensive research-intensive science university" (Marginson, 2009b, pp. 23-24). Hence, although the ranking system commenced as a government funded project, it does not favour universities in China to boost their global reputation but to show exactly where they stood. The rationale for adopting this approach to evaluating China's universities is that:

The Chinese government knew that China would need to make a transition from the medium technology manufacturing economy that was generating phenomenal

economic growth based on cheap labour from the countryside, to a knowledge-intensive services economy based on higher educational levels. It set itself the goal of forming a modernized tertiary education system at OECD levels of participation, the rapid expansion of R&D and the creation of a system of world-class research universities (Marginson, 2009b, p. 23).

In this view, the rapid growth of R&D and the output of scientific papers in China are seen as an “accelerated investment program” (Marginson, 2009b, p. 23), and the ARWU is an instrument to guide the program.

This analysis of the Chinese use of the ARWU in university governance and higher education development largely reflects Taiwan’s situation, in which higher education development to a large extent is also subject to external standards of measurement because the island is an externally dependent and export-led economy. Despite the economic success of Taiwan by which the island has been successful in transforming itself to a post-industrial economy with a strong technology industry (e.g. semiconductor industry) and a large service sector (Simon & Kau, 1992), its development of higher education still heavily relies on a benchmark of the West against which universities in the island-state are measured, given the continuing existence of the centre-periphery platforms in global higher education (Postiglione, 2005; Stensaker & Kehm, 2009b). As a result, the Western standard is viewed as the sign of the world-leading knowledge that Taiwan used to standardise research performance data. As a researcher from HEEACT pointed out:

The (Taiwanese) government wants to know the position of Taiwan’s universities in the global spectrum by using global university ranking. There are national rankings in Taiwan already. The country needs global ranking to know more about world-class university and which Taiwan’s universities are capable to compete for a place in the global environment (H1).

This remark substantially explains why the HEEACT in Taiwan had developed merely a research-, publication-oriented ranking system, when it decided to establish its own league table.

While this analysis provides a perspective from which the Taiwanese government uses the PRSPWU as well as other global university rankings (like the ARWU and THEWUR) as a governing technology to align the architecture of and

advance the competitiveness of Taiwan's higher education system (Mok, 2010a), the policies concerning this point largely refer to the discussion about the impacts of university rankings on higher education policies and systemic arrangements (as already examined in Chapter 5). In fact, as discussed, a unified but stratified higher education system has been established through the adoption of funding concentration in Taiwan. Special funding schemes (e.g. the 'five-year-fifty-billion' program) were launched to promote research excellence and internationalisation in Taiwan's HEIs (Lo, 2009).

This selectivity in the provision of research funding mainly aims at facilitating one or more of the elite universities to be an internationally renowned institution through climbing league tables (Teichler, 2011b). Apparently, the policy was developed based on the logic that encouraging universities to climb league tables is an efficient means of building world-class universities and therefore is also a way of keeping the higher education sector as well as the national economy internationally competitive. According to Deem et al. (2009), the experiences in Europe and Asia show that university rankings have been taken as a metric system by governments to indicate the standard of universities, thereby proving their world-class status or reflecting their distance from it. This demonstrates the function of university rankings in indicating the world-class status.

Seen in terms of international politics and competition, university rankings are used by Taiwan to maintain its competitiveness in the region. As explained by the HEEACT researcher:

(Talking about world-class university) is for the national strength and competitiveness. If Taiwan does not have such a thing as world-class university, it will not be able to survive in the globalised environment... For developing nations or small states, having several world-class universities is important in terms of making positive effects on the national development and economy because university provides a foundation for knowledge production. Taiwan is small and has no natural resources. If there is no knowledge and talent, what else do we have? Taiwan relies on continuous growth in research and knowledge production. And, university plays an important role, as it is a place for cultivating talents (H1).

She specified that Taiwan needs to compete with its neighbouring countries and



territories, such as Hong Kong, Singapore and mainland China. Therefore, the policy makers need a tool to indicate the strength and weakness of the higher education sector for improving it. From her point of view, university rankings to a large extent can provide such a function.

It is obvious that Taiwan has been using this logic to govern its higher education policy. For instance, in its blueprint document, the MOE (2010d) highlighted the international competition as the context for the call for pursuing better performance in league tables. It further listed the cases of the UK, mainland China, South Korea, Japan, the US and the EU to legitimise the policy of role differentiation and funding concentration, and pointed out that “Bucking international trends in competitiveness in the era of the knowledge economy risks a decline in national competitiveness and inexorable marginalization” (p. 4). While the Taiwanese government launched several policy initiatives to foster universities on the island to pursue better performances in certain areas so as to build at least one global top 100 university, it also noted that stronger industry-academia cooperation and technological research and development in the aspects of technology transfers and cultivating research talents would be one of the major benefits brought by the policy initiatives:

Growth of 10 to 15 percent on average per year is expected under the guidance of institutions’ industry-academia cooperation projects, amounting to 8,000 projects over ten years. As regards patents and technology transfers among these, annual growth is expected of between 20 and 30 percent, amounting to at least 2,000 projects over ten years, including 500 technology transfers with a value as high as NT\$1 billion, and 300 innovation and incubation projects, generating an output value of NT\$10 billion. As well as increasing industrial profits, these have a direct effect on the upgrading of industries and related innovation and research and development.

Industry-academia cooperation and technological research and development will provide industrial technology research and development support and consulting in the high technology industries of electronics, information technology, optoelectronics, biochemicals, healthcare, nanotechnology, environmental protection, etc, and in the traditional manufacturing industries of molds, machinery, agriculture and maritime activities.

Working talent expected to be cultivated in the relevant industries: Projected increases of 1,200 persons per year, and twelve thousand persons over ten years

These points made in the document substantially indicate the connection between university rankings and national interests, or Taiwan's interests in particular.

It is realised that the relevance of university rankings to the growth of universities' and national competitiveness heavily depends on the notion of world-class university. It is obvious that the emphasis on research performance and publication is closely related to the discourse on world-class university, in which the establishment of a world-university is somehow linked with the adoption of the US type of knowledge production, despite the call for a worldwide type of research excellence (Altbach, 2007; Arimoto, 2011; Toutkoushian & Webber, 2011). Nevertheless, in addition to these methodological concerns, this also involves a competition for normative leadership, which is considered a form of imperialism in university rankings and will be further discussed in Chapter 8 (Deem et al., 2008; Teichler, 2011b).

It is also important to note that recent reflections on over-homogenisation in academic circles have caused some influences on the Taiwanese use of rankings in governing its higher education sector. Indeed, as repeatedly mentioned, many authors have heavily blamed the effects of homogenisation brought by global ranking systems (Sadlak, 2010; Teichler, 2009 for example). This led to the convening of the Berlin Principles (CHE/CEPES/IHEP, 2006) that promotes a customer-centred and multi-dimensional approach to designing university rankings (Butler, 2010; Sadlak, 2010; Shin & Toutkoushian, 2011). Therefore, we have witnessed that the HEEACT launched a local ranking system called "College Navigator in Taiwan" (CNT) in October 2009. Different to the PRSPWU, CNT is a local, user-based ranking that covers a wider range of criteria and indicators to rank HEIs in Taiwan. There are 11 criteria including 24 indicators in the ranking system (Table 6.1). This personalised ranking allows its users to select and weigh these criteria and indicators by their own judgement (HEEACT, 2009).

Here the importance of the CNT is to illustrate the tension and integration between two concurrent trends, convergence and divergence, in global higher education (Dill, 2009; Vaira, 2009). While the use of global university rankings and related policy initiatives and governance activities represent Taiwan's active participation in the "world championship league" in higher education, finding the way

**Table 6.1: Criteria and indicators used in College Navigator in Taiwan**

Criteria	Indicators
1. Peer assessment	(1) Academic survey
2. Student selectivity	(2) Enrolment rate; (3) Number of national academic awards earned by students within last three years
3. Student demographics	(4) Proportion of graduate students enrolled
4. Teaching quality	(5) Faculty staff-student ratio
5. Faculty staff resources	(6) Proportion of full-time faculty members; (7) Proportion of professors with PhD; (8) Proportion of faculty members above assistant professor; (9) National Academy membership
6. Research output	(10) Number of articles published in SSCI per faculty member; (11) Number of articles published in SCI per faculty member; (12) Number of articles published in AHCI per faculty member; (13) Citations in SCI, SSCI and AH&CI per faculty member
7. Research grants	(14) Total amount of National Science Council grants by faculty members; (15) Total amount of National Science Council grants in sciences; (16) Total Amount of National Science Council grants in Social Sciences and humanities; (17) Number of National Science Council projects per faculty member; (18) Number of National Science Council projects in sciences per faculty member; (19) Number of National Science Council projects in social sciences and humanities per faculty member
8. Library	(20) Number of holdings per full-time-student
9. Financial resources	(21) Expenditure per student
10. Internationalisation	(22) Proportion of international students; (23) Proportion of international faculty members
11. Graduation Rate	(24) Proportion of a graduate class who earns a degree within four years

*Source:* HEEACT (2009).

of retaining the best and brightest parts of the local dimensions in the progress of internationalisation of higher education remains a challenge for higher education sectors in Taiwan as well as other developing and newly industrialised countries (Lo, 2009). A number of scholars have developed many useful frameworks and models to guide the development of higher education policy and institutional governance, thereby connecting global visions and national/local practices (Jones, 2008; Marginson & Rhoades, 2002; Zha, 2009 for example). Nonetheless, in practice, individual HEIs need to respond to the tendency towards performativity culture in higher education, although the comparison and competition among them are not necessary to transcend boundaries. The emergence of the CNT therefore marks an attempt made by the Taiwanese higher education sector to respond to the ranking

phenomena and corresponding activities and reflections, and possibly indicates one of the future directions of university rankings (Shin & Toutkoushian, 2011).

### **6.2.2 University Ranking as a Zoning Technology**

My second argument on using university rankings as a zoning technology is to respond to the recent discussions on regionalisation of higher education in East Asia (Lo, 2011). The prevalence of regionalisation of or regionalism in higher education in East Asia as well as other parts of the world (e.g. Africa) somewhat was enlightened by Europe's examples of the Erasmus and Bologna processes (Neubauer, 2011; Watson, 2009). Therefore, it is useful to discuss the European experience as a context for our discussion on Taiwan and East Asia at large.

According to Castells (2000a), European integration is a reaction to the process of globalisation, given the fact that Europe, in the sense of the European Union (EU), is active in the construction of globalisation. He considers that this is a realisation of globalisation, which removes the global-Europe-national hierarchy. As a consequence, the hierarchical conception on the relationship between two levels (i.e. Europe and EU member states) is undermined, and Europe has become a key, sometimes dominant, institution of governance in various aspects. On this basis, Dale (2008, 2009b) notes that there is a growing European role in education during the process of globalisation. From his view, competitiveness of the EU and its member states in education is to be achieved by "an incipient shift from 'national government' to 'European governance' in the Lisbon Agenda" (Dale, 2009a, p. 26). He argues that the regionalisation of education in Europe characterised by the Lisbon strategy will foster the formation of a new European education sector, which on the one hand will strengthen the European value and identity, and on the other is essential to maintain and improve the status and visibility of its education sector globally by synergising the educational capacities of EU member states (Dale, 2009b).

The crucial point here, for me, is that regionalisation (or Europeanisation in Dale's argument) shows the possibility of the emergence of a "Chinese-speaking zone" in education, given the possibility that English and Chinese may form a global linguistic duopoly in the context of China's rise (Neubauer, 2010). As argued by Neubauer (2011), there has already been an old form of regionalisation that bands similar countries together (e.g. the Asia-Europe Meeting [ASEM], the Asia Cooperation Dialogue [ACD], and the Association of Southeast Asian Nations Plus

Three [ASEAN+3]). Then, “the idea of the Greater China” may represent a new form of regionalisation that overlays older forms (i.e. ASEAN) with strong cultural elements and neoliberalism characterised by marketised features (e.g. bi-lateral trade agreements). In light of these views, it is recognised that regionalism is affecting higher education governance in the Chinese societies across the Taiwan Strait, and regionalisation is in progress. As reported by Mok (2010a):

Most recently, governments in China, Taiwan and Hong Kong have taken steps to offer mutual recognition to the academic qualifications granted by their different university systems, while China and Taiwan are actively developing closer research collaborations and recognising journals published in these two Chinese societies (p. 99).

In addition, Taiwan has recently opened its higher education enrolment to students from mainland China. Universities in Taiwan are allowed to enrol mainland Chinese students in both undergraduate and postgraduate programmes from 2011, though the number of enrolments is limited to 1,000 students. Despite that there are regulations banning Chinese students from numerous activities, like working while studying and staying after graduation (Anonymous, 2010; Sharma, 2010); this educational reform not only reflects the increasing interests of Taiwan in cross border higher education, but also represents a stronger educational link between mainland China (plausibly including Hong Kong) and Taiwan.

It is argued that the global university rankings run by Taiwan and mainland China can possibly be used as zoning technologies facilitating alignment of higher education systems (Knight, 2011),<sup>26</sup> thereby intensifying cross-border networks and integration in higher education in Chinese-speaking countries and territories, if more “Chinese elements” are incorporated in the ranking systems. For instance, both Taiwan and mainland China have developed their own citation indices in social sciences (namely, Chinese Social Sciences Citation Index [CSSCI] and Taiwan Social Sciences Citation Index [TSSCI]). If papers indexed in these indices or written in Chinese are counted as indicators of research performance in either the PRSPWU or the ARWU, a Chinese standard for measurement of university performance is

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<sup>26</sup> Knight (2011) argued that there are three regionalisation approaches, namely, functional, organisational and political. Quality assurance and accreditation and research citation index are seen as examples of functional approach initiatives aligning higher education systems in the region.

formulated. The zoning effect of ranking on university performance would have been strengthened, if the mutual recognition to journals published in these two Chinese societies mentioned by Mok (2010a) is enacted.

I consider three conditions as the crucial factors determining the possibility and actuality of the above argument. Firstly, the primary mission of these global rankings determines their function as zoning technologies. Currently, the PRSPWU and the ARWU do not consider papers published in local journals as indicators of research performance, though both of them use citation and publication counts as the measures to rank universities across the world. This is because papers indexed in SCI and SSCI somewhat are seen as non-biased indicators that are needed by Taiwan and China to monitor the research capacity of their higher education sectors (Hou & Morse, 2009; Liu et al., 2011). This rationalises the use of rankings as a governing tool that, as examined in the previous section, the strategy of “catching up” is embedded in. Hence, in contrast to the first use of ranking as a governing tool, the second use of ranking as a zoning technology implies a paradigm shift to “self-realisation” of Taiwan’s higher education in the process of globalisation, because incorporating papers published in Chinese journals into the international ranking systems to some extent means an emphasis on local (for example, Taiwan’s) dimensions in global scholarship, thereby upholding the mission of higher education in state-building (Lo, 2009).

Secondly, there is a contradiction between Taiwan’s political and economic interests in the process of regionalisation in higher education. In Dale’s (2009a) analysis, regional integration is a reaction to globalisation with an aim of pursuing national interests. As he puts it:

the EU and other regional organisations (the North American Free Trade Agreement and the Asia-Pacific Economic Cooperation) were set up as a defence against globalisation, and the purpose was to ascertain the consequences of this for education policy. This led us quickly to focus on Lisbon, which seemed to be a perfect case for this kind of analysis. However, it rested on implicitly hierarchical, tiered, assumptions about the relationship between the ‘scales’ of global, regional and national, where the regional acted as a kind of ‘collective security’, that required the ‘national’ to cede some of its power/discretion to the collective/regional, in order to secure its fundamental interests more effectively (p. 26).

The quote indicates an important point that a crucial common, shared interest is a foundation for regional integration, as nation-states may need to give up some of their sovereignties in the process of regionalisation. In fact, nationalism remains a powerful force that substantially affects the development of regionalisation (Hawkins & Neubauer, 2011).

Then, if we consider university ranking as a zoning technology, it is important for us to look at Taiwan's interests in strengthening the discourses and institutions of "Chineseness" in higher education. It is clear that Taiwan's university sector would benefit from the growth of "Chineseness" in global higher education, as this would help extend its presence in the global academic community. The emergence of a Chinese standard of academic research and higher education would strengthen Taiwan's discursive power in the international politics of higher education; and would plausibly attract more students from overseas to study in Taiwan. Indeed, the Taiwanese government has been attempting to strengthen its role as education provider in the global higher education market through fostering Taiwan's universities to recruit more international students since the early 2000s. In this regard, Taiwan should welcome the emergence of a Chinese-speaking zone in education and of a Chinese-centred ranking system.

However, the relation between Taiwan and mainland China is not only about cooperation, but also competition. In the economic aspect, Taiwanese people/students are afraid of competition from mainland China brought by the opening-up policy. This was why there were many debates and controversies on the island and many limits were set to restrict the number and activities of students from mainland China, when the Taiwanese government decided to open its higher education enrolment to the mainland (Anonymous, 2010; Sharma, 2010). More importantly, though the rise of China provides many economic opportunities for Taiwan, politically it is also seen as a threat (deLisle, 2010). Despite the fact that the cross-strait ties have been improving since President Ma Ying-jeou took office in 2008, tensions and uncertainties across the Taiwan Strait still exist. While it is apparent that either unification or independence is not a real choice at the present stage, more attention should be paid to discussions of a possible and appropriate framework for the cross-strait higher education governance, especially the political ones that many collaborative activities at both individual and institutional levels rely on (Knight, 2011).

Thirdly, from my point of view, *self-sufficiency* in terms of status and prestige

determines whether a Chinese-speaking zone in higher education is an appropriate way of responding to globalisation. As argued by Dale (2009a), regionalisation is seen as a defensive strategy against the external pressures of globalisation. From this perspective, the primary aim of the region-centred projects is to enhance the competitiveness of the region as a whole, and to stress the role of its institutional architecture (i.e. EU) as a “collective competition state”. In his view, the two levels of regional and national should be blurred in the process of regionalisation (pp. 25-28).

Nevertheless, in addition to a response to external pressures, I argue that regionalisation can also be viewed as a way of internalising globalisation by integrating “regional” with “global”. Such an analysis views the regional level, rather than the global, as the main arena of international competition (Hawkins & Neubauer, 2011). In this sense, internationalisation of higher education, especially for non-elite universities, can mean the pursuit of being an active, key regional actor, instead of acting as a global player. This is because, for some HEIs, international competitiveness might be better achieved at the regional level, and thus through a new strategy of regionalisation. Hence, for those non-elite but nationally competitive HEIs, which are currently pursuing internationalisation, regionalisation might also refer to “*de-internationalisation*”.

The US is a good case of a self-sufficient system. In the country, HEIs merely pursue ranking higher in the *US News and World Report's America's Best Colleges*, but are little interested in the global rankings imaginary invoked by the ARWU and the THEWUR/QSWUR. Marginson (2009b) characterises this attitude as “the option of non-engagement”, which is based on a belief that “best in America is best in the world” (p. 30). Following this analysis, a Chinese-centred university ranking system represents an alternative to the prestige generator of existing global ranking systems, which can amply reflect the status and competitiveness of a university regionally and somewhat globally. Generally speaking, the self-sufficiency of such an anticipated Chinese-speaking zone relies on the size of its university sector, because it needs a critical mass to sustain a regional/international field for status competition and a regional/international market for positional goods. Table 6.2 shows the numbers of HEIs, tertiary students and the world's top 100 universities in the US and those in four Chinese-speaking societies. If we see the size of the American system as a benchmark of self-sufficiency for its counterparts, the number of HEIs in the Chinese societies is in a size comparable with that in the US, while the number of tertiary students is



**Table 6.2: The numbers of HEIs, tertiary students and the world's top 100 universities  
in the US and four Chinese-speaking societies**

	The United States	Four Chinese-speaking Societies <sup>1</sup>				
		Total	Taiwan	China	Hong Kong	Macau
<b>No. of HEIs<sup>2</sup></b>	<b>6,742</b>	<b>4,041</b>	164	3,846	21	10
<b>No. of tertiary students<sup>3</sup></b>	<b>27,369,242</b>	<b>28,517,029</b>	1,228,037	28,361,795	123,985	31,249
<b>No. of the world's top 100 universities (2010)</b>						
<b>PRSPWU</b>	<b>56</b>	<b>0</b>	0	0	0	0
<b>ARWU</b>	<b>54</b>	<b>0</b>	0	0	0	0
<b>THEWUR</b>	<b>53</b>	<b>5</b>	0	3	2	0
<b>QSWUR</b>	<b>31</b>	<b>6</b>	1	2	3	0

*Notes:* (1) The four Chinese-speaking societies are Taiwan (ROC), mainland China (PRC), Hong Kong (a special administrative region (SAR) of the PRC) and Macau (a SAR of the PRC). (2) The definition of HEIs varies in different countries/societies. In mainland China, the number refers to the total number of postgraduate institutes, regular HEIs, HEIs for adult learning, and non-state run/people-run HEIs. In Taiwan, the number refers to the total number of universities and colleges and junior colleges. In Hong Kong, the number includes government-funded and self-financing post-secondary institutions. In Macau, the number refers to the government-funded institutions. In the US, the number includes 4-year institutions, 2-year institutions, and less-than-2-year institutions. (3) The numbers include students studying undergraduate, postgraduate and sub-degree levels. The numbers of Taiwan, Hong Kong and the US refer to the figures for 2009/10, and those of China and Macau refer to the figures for 2008/09.

*Source:* MOE, Taiwan (MOE, 2010b); MOE, China (2009); UGC, Hong Kong (2010); IPASS, Hong Kong (2010); NCES, US (2010); Tertiary Education Services Office, Macao (2009)

larger than that in the US. In this regard, a Chinese-speaking zone is a plausible anticipation of the growth of “Chineseness” in global higher education. Nevertheless, the number of the world’s top 100 universities in the Chinese societies is much smaller than that in the US, no matter whether we follow the citation-count method used in the PRSPWU and ARWU or the reputation survey adopted by the THEWUR/QSWUR. If we believe that these rankings are non-biased metrics to project the world-class status, this fact can suggest that the university sectors of these Chinese societies are far behind on research quality as well as other aspects. Yet, if we accept the argument that, regardless of the methods used, ranking exercises are inevitably grounded on a manner of privileging the privileged (Sadlak, 2006; van Vught, 2008), the change of using a Chinese standard of academic research and higher education in measuring the performance of HEIs will not cause negative impacts on the research quality of HEIs from the Chinese societies, but can strengthen their visibility in the global higher education landscape.

### **6.2.3 University Ranking as a Mechanism of Agenda Setting**

The third use of league tables is an extension of the previous point about rankings as a zoning technology. In the previous section, I have argued that university rankings can be used as a zoning technology to promote a Chinese standard of academic research and higher education in Chinese societies. On this basis, this section anticipates that university ranking has a potential function of influencing higher education systems in non-Chinese speaking societies through promoting the discourses and institutions of “Chineseness” in global higher education. This anticipation leads to the prospect in which Taiwan, as part of the region, can use its ranking systems to extend its influence and build its reputation in global higher education (Lo, 2011).

With regard to global university rankings as a mechanism of agenda setting, Marginson’s (2009b) analysis of the reputation-survey approach used in THEWUR/QSWUR is useful to explain how ranking has been used as a national project to reduce the American dominance. He argued that there is a connection between the good performances of British universities in these ranking exercises and Pax Britannica heritage because of the existence of the “halo effect” (Salmi & Saroyan, 2007) or “anchoring effects” (Bowman & Bastedo, 2011). This argument can be proven by the methodology with a heavy proportion of reputation surveys in which responses are gathered mainly from the UK and the former British colonies. On this

basis, it is realised that the reputation competition enacted by these ranking systems is a successful case of reducing the American global dominance and sustaining the UK's core role in the imperial global geo-politics of knowledge through the use of university rankings because "the UK universities performed extraordinarily well in *The Times*, much better than any other ranking system" (Marginson, 2009b, p. 26).

In light of this analysis, it is possible for Taiwan to use university rankings, such as the PRSPWU, as a mechanism of producing status and reputation and extending influences through reviewing the criteria used in the league table within the region. Apparently, hosts of the ranking systems are not totally free in setting the criteria and indicators used in their indices (Hou, 2008; Liu & Cheng, 2005). However, if we agree that there is a connection between the prestigious status of the American university system and Pax Americana, we can see the prospect of a relaxation of the western preconception in global higher education by adding Chinese elements (e.g. the use of Chinese language) in the context of China's rise (Neubauer, 2010). Actually, the latest trend driving ranking development is to seek the possibility of reflecting and specifying various missions and activities of different HEIs in a league-table format through multi-dimensional national/global ranking (Butler, 2010; Hou & Morse, 2009; Sadlak, 2010). For example, the EU is attempting to create a global database of universities called the Multidimensional Global ranking of Universities (U-Multirank) with a hope of overcoming the overemphasis on research and the converge towards a common pattern caused by existing ranking systems (Butler, 2010). In addition, in order to reflect regional characteristics, there is an anticipation of the growing importance of regional ranking systems (Shin & Toutkoushian, 2011). In fact, many major ranking systems, including the ARWU, the THEWR and the PRSPWU, have provided rankings by region as the subsystems of their global rankings. On the one hand, this development proves the tendency towards regionalisation of higher education. On the other, it somewhat reflects that the global landscape of higher education is developing towards a multi-polar pattern.

Furthermore, the point of "extra regional" made by Robertson (2010) helps us come up with a view that a ranking system can be used to promote a regional academic standard globally. In her analysis of Europeanisation, Robertson presents the Europe-centred projects as the explicit extra-regional globalising strategy that realises a competitive European higher education area and market. She views the regional higher education governance that has been actualised by the Bologna Process

as the institutional architecture spreading the essences of the European higher education across the globe. In this sense, the Bologna Process is an institutional architecture of projecting the European soft power globally.

Based on these analyses, the processes of regionalisation and globalisation of higher education might provide a new platform for normative leadership by the Chinese societies. In fact, China has been attempting to enhance its soft power in different aspects (Li, 2009). In education, the country intends to promote Chinese language and culture through the establishment of Confucius institutes across the world (Yang, 2007, 2010). This development indicates that the extension of a Chinese-speaking zone in education and of a Chinese-centred ranking system is not necessarily limited within the borders of the four societies, given the popularity of learning Chinese and also the increasing mobility of academics and students and the growth of Chinese communities across the world.

Bearing all these aspects in mind, it is not an exaggeration to say that Taiwan has already owned an important potential resource (i.e. the PRSPWU) for reshaping the global landscape of higher education. As a researcher from HEEACT remarked, “when talking about global university ranking, people would think of ARWU and then THE-QSWUR. But now, people gradually pay more attention to PRSPWU” (H1). For Taiwan, the emergence of Chinese-centred ranking systems and its extra-regional effect might bring an opportunity to turn its position from periphery to core in the geo-politic of higher education. Crucial to this process is a political circumstance in which Taiwan is able and willing to collaborate with the other Chinese societies across the Taiwan Strait. As said, the prospect of the anticipated Chinese institutional architecture in higher education focuses on the shared economic and cultural interests between Taiwan and mainland China. Nevertheless, with regard to political interests, Taiwan might not welcome the growth of China’s soft power or an active response to the idea of “the Greater China” (Hawkins & Neubauer, 2011; Neubauer, 2011), because this might lead to political pressure to achieve Taiwan’s formal political integration into a larger China (deLisle, 2010). In fact, my fieldwork suggests that people in Taiwan have diverse views on collaboration with the mainland. A respondent for example said that mainland China is Taiwan’s major rival in higher education as well as many other aspects. Taiwan, as a small state, should have threat perceptions in its assessments of a rising China’s capacity and will (H1). Yet, another respondent believed that collaborations or even integration in education is a way of

enhancing Taiwan's soft power in the mainland. He said:

Many people (in Taiwan) worry that students from the mainland will take our jobs, and that the government will spend our money to cultivate Chinese students. These people are short-sighted. They do not realise that opening enrolment to students from mainland China can make them accept the concepts of democracy and freedom. They will influence China in the future after returning to the mainland (D3).

In a sense, Taiwan is at a crossroads. On the one hand, the tendency towards regionalism and regionalisation shows the possibility of the prevalence of a Chinese-speaking or Chinese-centred regime in higher education that may challenge the existing dominance of the English-speaking countries in knowledge construction. The Taiwanese higher education sector can plausibly extend its influence by using its ranking system as a mechanism of agenda setting in global higher education in such a process of regionalisation. This brings the “centripetal forces” (Hawkins & Neubauer, 2011) that pull Taiwan toward this vision of regionalisation. On the other hand, however, Taiwan, as a weaker player in cross-strait relations, needs to consider its position of defending its stand on sovereignty. This represents a type of nationalism that forms the “centrifugal forces” pulling the island-state away from regionalisation (Hawkins & Neubauer, 2011). This tension illustrates the importance of political factors in regionalisation of higher education, though university rankings can be a powerful institutional architecture in projecting organisational and functional influences on higher education (Knight, 2011; Lo, 2011).

### **6.3 Conclusion**

This chapter proposed and discussed how Taiwan can make use of university rankings to improve its visibility and status in global higher education in anticipation of a change from an imperial geo-politics of knowledge production to a multi-polar world order in global higher education. The discussion is heavily grounded on an emphasis on the rise of China on the global stage and the extension of its normative power in higher education through the process of regionalisation. The core argument is that the discursive basis for the establishment of the complex system of global higher

education is not totally outside the control frame of any national or multi-national setting (cf. Neubauer, 2010). In contrast, individual states, even as small as Taiwan, are able to amplify their voices in the discourse of globalisation of higher education through intra-regional collaboration and the establishment of institutional architecture (e.g. ranking systems ).

From this perspective, as ranking systems can somewhat serve the purpose of aligning higher education systems in the region, the discussion of university rankings should be focused on the room to create an alternative to the established “global” and “world-class” image, which is grounded on the Anglo-American paradigm. This leads us to the discussion of an antinomy of ranking, in which global league tables can simultaneously be seen as an instrument for upholding both hegemonic and anti-hegemonic forces. This issue will be further discussed in Chapter 8.

## **Chapter 7**

### **Dimension 3: Manifestations of the Normative Power of University Rankings**

#### **7.1 Introduction**

In Chapter 5, we have seen evidence of how university rankings and related phenomena have altered the organisational and individual behaviours in higher education. Some argued that these organisational and individual responses to rankings can be analysed in terms of conceptual implications. This has led to a conclusion that university rankings exercise a form of normative power in higher education. This understanding of rankings formulates Dimension 3 of our four-dimensional framework through which we examine the attribute and extent of the proliferation and dominance of rankings in Taiwan's higher education. The core argument is that while university rankings impose a growing power shaping the normative environment of universities, the degree of its penetration is determined by the hierarchical structure of the higher education system.

#### **7.2 Normative Power: An Approach**

Recent studies on the discourse of university rankings point to the ways in which organisational and individual responses to competitive rankings can be analysed as discourses affecting temporal elements in higher education. In the existing literature, the discourse of rankings is analysed in light of the work of Foucault and Bourdieu in order to explicate the natures of the proliferation and dominance of ranking systems. While the former illustrates how the model proffered by ranking systems are internalised by institutions (including HEIs and government agencies) and their members, thereby forming a propensity of self-disciplining in academic circles, the latter indicates that competition, especially in terms of reputation and status, is endemic to the academic field.

Foucault's conception of discipline can be used to explain the characteristics of control enacted by rankings, because university ranking exercises the functions of "disciplinary technologies" through which people become the objects of particular types of knowledge. As Foucault noted:

In discipline, the elements are interchangeable, since each is defined by the place it occupies in a series, and by the gap that separates it from the others. The unit is, therefore, neither the territory (unit of domination), nor the place (unit of residence), but the *rank*: the place one occupies in a classification, the point at which a line and column intersect, the interval in a series of intervals that one may traverse one after the other. Discipline is an art of rank, a technique for the transformation of arrangements. It individualises bodies by a location that does not give them a fixed position, but distribute them and circulates them in a network of relations (Foucault, 1977, pp. 145-146, italics in the original).

This analysis of disciplinary practices reflects that power can be exercised not only in a direct manner but also through a mechanism of codifying prescriptive aspects of qualifications.

University ranking provides a paradigm case of a disciplinary technology, as it shows the subjection of individuals to the mechanisms of disciplinary power. Sauder and Espeland (2009) pointed out that university rankings can be substantially connected to surveillance and normalisation, two key forms of disciplinary technologies, in Foucault's analysis of disciplinary power. As they argued, constant surveillance of performance through the use of university rankings is a kind of control that allows meticulous attention of rankers towards HEIs within the context of enhancing accountability and transparency in the marketised higher education. In this sense, HEIs' "reactions to rankings are best understood as the evolving responses of an assortment of actors who struggle to reconcile their sense of themselves as professional educators with an imposed market-based logic of accountability" (Sauder & Espeland, 2009, p. 66). In fact, as examined in Chapter 2, "the quality management process" (Dill, 1995, 1999) and "audit culture" (Strathern, 1997, 2000) in higher education has generated an environment, in which stakeholders in higher education are continuously influenced and monitored by many performance measures. Among them, rankings are especially important because they substantially affect stakeholders'



decisions on various matters in higher education (Hazelkorn, 2007b; Sauder & Lancaster, 2006).

Furthermore, over time, university rankings have casted reactivity<sup>27</sup> by which faculty staff and HEIs “alter their behaviour in reaction to being evaluated, observed, or measured” (Espeland & Sauder, 2007, p. 6). This is not only a threat to the validity of ranking exercises, but also represents a process of internalisation of the external perceptions of university (Sauder & Espeland, 2009). Indeed, the discipline of rankings has imposed a process of normalisation, in which rankings have intensified comparison between HEIs by applying a common metric to all institutions. This “single norm for excellence” (Sauder & Espeland, 2009, p. 73) created by rankings means that league tables become tools of differentiation, which generates or reinforces the hierarchical structure of higher education systems. As a consequence, differences among HEIs are seen as a shortcoming as institutions are driven to conform to the norm as closely as possible. In other words, rankings are mechanisms of homogenisation that discourage diversity in higher education (Dill, 2009; Teichler, 2009).

Here I use the term *normative power* to generalise the above characteristics of university rankings for two reasons. The first is that these characteristics of university rankings are ideational and social rather than temporal. The second reason is that of its relation to normative theory, i.e. the role of social norms and shared values in judging and justifying social activities.

While these characteristics of rankings reflect that ranking exercises have become a self-disciplining force and therefore stakeholders of higher education may find it difficult to decouple from the pressure created by league tables (Sauder & Espeland, 2009), the work of Bourdieu reminds us of the prerequisite to the manifestations of this normative power. As Bourdieu (1988) noted, “academic capital is obtained and maintained by holding a position of enabling domination of other positions and their holders” (p. 84), and it “is much more linked to hierarchical position than to any extraordinary properties of the work and the person” (p. 84). This quote indicates that power relation and the related stakes and interests in the academic circles are closely linked to hierarchical settings of the field. Hirsch’s (1976) concept

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<sup>27</sup> The concept of reactivity reflects that measures are reactive. The concept “blurs the distinction between the act of measuring and its object” (Espeland & Sauder, 2007, p. 3). Some argue that it contaminates results of measurements, while some believe that it is an inevitable part of social measures because of human reflectivity (see Espeland & Sauder, 2007 for detail).

of “positional goods” then explains this desire for competition and (re)production of hierarchy more explicitly. According to Hirsch, the status value of education (as a positional good) depends on the relative level of consumption. It is based on exclusivity or scarcity, and hence leads to positional competition. It is a zero sum game, because when some people gain, others must lose out. Then, it is recognised that university rankings provide a function of institutionalising such a positional competition at the institutional level. As Bastedo and Bowman (2011) said, “rankings constitute a third-party status system that form a significant part of the normative environment of universities... they have a unique power to shape the normative environment of the organisational field without participating or providing material resource flows” (p. 8). Teichler (2011b) called this the “sub-intellectual” power in the public discourse, which “arouse feelings of doing something which leads to satisfaction” and “stir up feelings of shame and desires for boasting, and the like” (p. 58). In my view, university rankings give the function of currency in the market of positional goods (e.g. status, reputation and prestige). In short, the normative power of university rankings can be strong with the desire for “game playing” in academia (Bourdieu, 1993) or with the condition in which academics think “rankings are sexy” (Teichler, 2011b, p. 58).

Nevertheless, Bourdieu’s (1988) analysis of academic capital also reminds us that this normative power only functions with “the structure which render them possible and effective”; and “on condition that they are willing to play the competitive game, and accept its objective” (p. 88). In this regard, it is argued that the core issue here is about how much autonomy individual HEIs and academics enjoy in keeping a distance from participating in this competitive game. For Teichler, it is difficult for HEIs and academics to resist the normative power of rankings because individual institutions and academics are somehow in an unequal position with rankers. As he said, “the producers and advocates of the issue at stake invest so much time and energy in ruling the debate that discourse is dominated by the lobby and the critical voices have little chance of being heard” (Teichler, 2011b, p. 58). More importantly, this lobby can be linked to a social network or a reputational hierarchy which institutionalises mutual acquaintance and recognition, thereby generating social capital in the academic field (Federkeil, 2009, also see Bourdieu, 1986, 1988).<sup>28</sup> This

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<sup>28</sup> As Federkeil rightly pointed out, this social capital can be transformed into economic capital through

“extra-intellectual element” of rankings (Teichler, 2011b) suggests that it is not easy for HEIs and faculty staff to stay away from the normative power of rankings.

Meanwhile, it is recognised that there is a strong emotion which forms a resisting force against the normative power. To a certain extent, this negative discourse is related to universities’ and faculty members’ negative attitudes toward ranking because the prevalence of rankings is a serious challenge to their core role and power in quality assurance (Harman, 2011). Also, it is extremely difficult, if not impossible, for various stakeholders to reach a consensus on the concept of quality (Usher & Medow, 2009; Usher & Savino, 2006). Hence, there are always queries on methodologies used in different ranking systems and their relevance to measuring the productivity of a faculty staff (Webber, 2011). Moreover, the criticism of homogeneity and the call for diversity in higher education provide a strong response to the effects of homogenisation brought by one-dimensional rankings (Dill, 2009; Teichler, 2009; UNESCO, 2010; Vaira, 2009; Watson, 2009). In fact, this perspective on quality is echoed by academics in Taiwan. A faculty member from the field of social sciences expressed:

There should not be a sole definition of “quality”, but should be different versions of “quality”. Good researches do not have to be written in English. We should respect the value of local researches... I believe there is a matching point between personal research interest and the MOE’s standard (fieldwork in Taiwan, April 2008) (Lo, 2009, p. 739).

In addition, as said, there is a negative public discourse on rankings that is grounded on the winner-take-all effects on higher education market and allocation of resources (Elkus, 2008; Frank, 2001, 2004; Frank & Cook, 1995). Given that this has caused a positional arms race in higher education, Dill (2009) summarises these negative effects of rankings as a “highly costly, zero-sum game, in which most institutions as well as society will be the losers” (p. 102). The focus here is on whether or how these responses from the academic field can become a force counterbalancing the normative power of ranking, thus allowing HEIs and faculty members to remain independent from the competitive game.

In sum, these discourses on rankings illustrate “a thin line between love and

hate” (Salmi & Saroyan, 2007, p. 10), which is used to conceptually frame the ranking phenomenon and to assess the extent of the effects of the ranking normative power on Taiwan’s higher education.

### **7.3 Struggling between Love and Hate**

This section aims to examine the capillary effect of the normative power of rankings on Taiwan’s higher education. As said in the previous section, the degree of penetration of this power depends upon whether a HEI or a faculty member is willing to embrace the competition or how much autonomy individual institutions and faculty members have in making such a decision. On this basis, their different attitudes toward the normative elements of ranking exercises illustrate the capillary effect of rankings. Here I employ a metaphor, in which “love” implies embrace of the ranking movement and “hate” refers to resistance, in order to demonstrate the differences.

#### **7.3.1 “Love”**

Two characteristics of the academic world, its hierarchical power structure and its orientation to competition, incline academics to think that “rankings are sexy” or at least “necessary evils” (Teichler, 2011b), thereby facilitating manifestations of the normative power.

#### ***The Way of Achieving Pride***

HEIs and faculty members are keen to pursue better performance in ranking exercises because the normative standard imposed by league tables is expressed as a channel of actualising reputation. Reputation, in Luhmann’s (1990) view, is the “second selective code” in the world of science, if the basic distinction of true-false is the first. Yet, as reputation is invisible, the society, including the academic community, needs indicators and mechanisms to indicate and allocate reputation. In this regard, while the information collected in ranking exercises is translated into indicators of HEIs’ performance, ranking systems somehow have become a mechanism for allocating reputation, therefore making reputational hierarchies of the academic world more visible (Federkeil, 2009). A respondent from HEEACT reported:

People started to pay more attention on rankings... because the results of rankings sometimes subverted people's understanding of the hierarchy (of Taiwan's higher education system). The fixed positioning has been gradually changing. The National Taiwan University may not be number one, because many of its competitors are rising... Reputation needs a long time to grow up. It is social ascription... But, some HEIs are reaching the top level of the hierarchy and therefore people's perception is changing (H1).

Sauder and Espeland (2009) see the construction of reputational hierarchies as a process of normalisation of the discourse of the competitive game. They noted that "normalisation serves a 'double function' by creating a classificatory system that immediately rewards or punishes those it classifies" (p. 72). Thus, those who are likely to be rewarded would not mind being objects of comparison or even to proactively join the competition, as they believe rewards are commensurate with reputation and to some extent performance in ranking systems. A department head from University A said:

For example, the National Cheng Chi University, National Tsing Hua University, National Chiao Tung University and National Cheng Kung University are willing to compete, as they found themselves capable of challenging the status of University A. If there are indicators showing that they do better than University A in specific aspects, the results would help a lot in their student recruitment (A1).

This head emphasised that it is not just students who consider reputation, but also the faculty staff. He further explained:

University A would not offer me a better salary, but can provide me a better environment, like its location, its leading position and so on... I would not leave University A after I have built up a relationship with its reputation (A1).

This view substantially reflects that individual faculty members are in a relation of wide-ranging and prolonged dependency upon the institutional position in the hierarchical setting. As Elsbach and Kramer (1996) and Schleef (2006) explained, there is a close link between members' perception of their organisation's identity and their own social identity. In light of this analysis, it is realised that the interests of both

HEIs and faculty members are deeply involved in the reputational competition in higher education. Moreover, as indicated by Bourdieu (1988), both institutions and their members benefit from this positional advantage in the process of accumulation of academic capital. He wrote:

... capital breeds capital, and holding positions conferring social influence determines and justifies holding new positions, themselves invested with all the weight of their combined holders (Bourdieu, 1988, p. 85).

From this perspective, the “love” toward university rankings, or competition in general, is based on vested interests or a prospect for obtaining such interests in the hierarchical settings of higher education.

Nevertheless, it is obvious that, for some HEIs and their faculty staff, rankings denote pressure rather than attraction, though this pressure sometimes is subtle. For them, rankings are “necessary evils” to survive in the competition for academic power and resources. In this sense, the pressure for comparison is difficult to resist. A dean from University B explained:

Universities are in a helpless situation. They are not willing (to join the comparison), but are forced to do so. When every institution pays much attention to rankings, you cannot ignore the phenomenon... Competition has been intensified since the launch of the “five-year-fifty-billion” program and Teaching Excellence program, because universities, which were granted by these programs, used these identities to do their publicity campaign (B2)

Here we have witnessed that university administrators worry that their universities would be stigmatised and punished, if their affiliations stray from the competitive field set by rankings. As a result, HEIs and their faculty staff “conform to normative standards they purport to reject” (Sauder & Espeland, 2009, p. 73).

This example illustrates how the normative power imposed by rankings is manifested in Taiwan’s higher education. However, it is also important to note that the manifestation is closely linked to the public discourse on rankings as well as related policies and practices. According to a faculty member from University B:

Rankings would draw media’s attention. The media then would criticise the

governments and universities based on the result of rankings. No matter whether the critics are relevant or not, they attract the public's attention and force us to consider the issues (B3).

Because of this extra-intellectual element of the ranking debates (Teichler, 2011b), academic managers have to pay attention to the ranking discourse, even though their institutions would find it "impossible to enter the global rankings", a dean from University C said. This is because "everyone is competing for resources, including good teachers, outstanding students and staff, equipments as well as funding... we need to identify the right directions that we should go toward" (C2).

This dean's view significantly highlights the nature of university rankings as an "interorganisational dependency" (Bastedo & Bowman, 2011), which reflects that "universities as organizations are highly dependent and contingent upon the continuing financial support generated by external resource providers" (p. 4); and "how organizations adapt and manage the norms, values, and beliefs in their environment to increase the probability of organisational survival" (p. 8). This resource dependence account of rankings illustrates an environment in which university rankings influence resource flows in higher education. Consequently, there is a resource dependency relationship, in which HEIs are "financially impacted by the evaluations of certain legitimate third parties through their influence with external resource providers" (p. 19). According to Bastedo & Bowman, universities are able to develop tactics to respond or even reduce the influence of rankings over their resources. Nonetheless, given the fact that the government is the major resource provider, a researcher from HEEACT described the influence of rankings and the universities' responses in Taiwan this way:

(Universities) need to prove their quality to the government. For instance, the NTU does not have to worry about its financial sources as it has become one of the world's top 100. This ensures that the government will continue to fund it... Of course, they (the government) like to have such an external mechanism, which functions as an external quality assurance mechanism to prove HEIs' quality as well as to uphold their accountability. Furthermore, the result will also bring the recognition by students. This will change their attitude toward particular institutions and somewhat ensure the continued financial support (from tuition fee) (H1).

This description shows that rankings become a way of transforming social capital into economic capital (Federkeil, 2009). From an institutional perspective, this interorganisational dependency provides a predicted set of strategic responses, with which universities are expected to take university rankings into serious consideration when organisational strategies are made (Bastedo & Bowman, 2011). From an individual perspective, this resource dependence plus other elements of the ranking phenomenon contribute to shape the *habitus* (Bourdieu, 1988, 1993), which influences how individual faculty members play the academic competitive games. This point will be discussed in the following section.

### *Competitive Disposition*

My understanding of the competitive disposition suggests that faculty members are expected or even oriented to compete for higher status in the academic hierarchy. According to Bourdieu (1988), the academic competitive games are based on the concentration of academic power that leads to accumulation/monopoly of academic capital and reproduction of the academic hierarchy through creating the order of succession. Thus, he described the competitive disposition as a part of the working environment of the academic field:

Far from containing the threat of a permanent revolution, the struggle of each against all which this permanent competition stimulates among those who have once entered the race, and who have the *competition dispositions* both required and reinforced by the race (Bourdieu, 1988, p. 87, emphasis added).

He continued to argue that faculty members working in such an environment need to have “unconditional respect for the fundamental principles of the established order” (p. 87) because, for him, academic power is grounded on prestige and attraction. Members of the academic field hence are obligated to protect and consolidate the reputation of the power. He believed that sometime later these behaviours would become a belief, with which faculty members would follow the way of the *habitus* “more unconscious than conscious” (p. 91).

As we have known that rankings have a function of propelling the institutionalisation of normative power, Bourdieu’s analysis provides a good



illustration of the exercise of the normative power in the academic circle. On this basis, we understand that analysing the influences of university rankings cannot simply be a demonstration of the immediate and temporal effects of league tables only, but also an investigation of their impacts on the power relationship and structure in the field. When an associate dean from University A was asked about how rankings affect the distribution of power and resources in his university, he described the situation this way:

For me, there is an inclusive environment at University A. It can give me the space in which I can have my own thoughts. Because I am a full professor, I do not care about whether I am given the resources. In any case, I can do my research. But, I object to Egalitarianism... there would be free riders. So, concentration of resources, emphasis on research, and performance indicators, all these are a mix of love and hate for me... other universities may complain that all resources are allocated to University A. But, actually schools of University A are divided into three tiers. The first tier includes medical school and engineering schools. The second consists of science school, agriculture school and so on. The third tier refers to social sciences school, law school and humanity school. Our school is inferior in this university, and we are given less money. So, there is stratification among HEIs, but also within the university, and among the faculty members (A4).

When he was asked about the processes of differentiation and homogenisation imposed by rankings in Taiwan's higher education, he saw the processes as a part of the formation of the habitus:

There are new indicators, but there are established mainstream values or standards in a university. A newcomer will become a part of the mainstream. He will hold an invested interest in it. And, he would not give it up. This is the situation in universities. Only those who are fools or really capable may want to change the situation... These kinds of people are very rare. Among the 200 faculty members in our school, I only see one or two having the talent. I cannot do so indeed. This is too difficult (A4).

His statements provide an explicit account of the hierarchical settings that exist in different levels of Taiwan's higher education system. Analysing his view in light of

Bourdieu's (1988) analysis, it is realised that he had held a hierarchical position allowing him to obtain and maintain the academic capital he needed, and "enabling domination of other positions and their holders" (p. 84). He therefore did not see rankings and other related policies and practices as a threat, but tended to view such a ranking effect as a way of defending and reproducing the academic hierarchy by restricting the access to the "corps".<sup>29</sup> In fact, as examined in Chapter 5, many respondents reported that the current practices of weighting and rankings differences among institutions and faculty members are unfair to new faculty members who are under a lot of pressures to publish, while experienced faculty staff, especially those who hold full professorship, preserve resistance to the normative power of rankings. The situation described by another full professor from University A confirms this standpoint:

I can decide what I want to do based on my research interests. If my interests can be fitted with the "five-year-fifty-billion" program, I would be happy to apply for the fund. But, I would not scarify my teaching because of research... I even hope that my research is not funded by the "five-year-fifty-billion" program, then I can have more freedom. Right! I can spend as long as I wish with my students. I can choose my research topic freely. I can decide to publish in any journals I like, no matter whether they are local or international ones. I do not have to care about whether it is SSCI or not.

I think this is a personal choice. You can do the same if you want... But new teachers who want to get job promotion would focus on publishing in SSCI journals and tend not to spend time on teaching or service. I would say it is Utilitarianism (A5).

This response substantially reflects that some stakeholders in the Taiwanese higher education sector have the capability of resisting the normative power of rankings. According to Foucault's (1980) approach to power, this represents a challenge to the particular typical type of subjectivity that discipline imposes. I will return to this point about "resistance" in our discussion on "hate" below. Here we focus on the "anxiety" and "allure" imposed by dismissal and promotion respectively (Sauder & Espeland, 2009). Though this professor claimed that there were choices for

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<sup>29</sup> Sauder and Espeland (2009) made a similar point in their analysis of the discipline of rankings by using Burawoy's (1979) study of labour relation.

faculty members to plan their academic life, she obviously ignored the fact that she holds the academic capital that her younger colleagues do not. Thus, not surprisingly, those are the subjects to be measured in the competitive game do not many choices but need to follow the rules set by those who hold the dominating positions in the hierarchy. A young faculty member explained:

I am not in that level. Hence, I only care about how to get job promotion in the shortest possible amount of time. Actually, I rarely think about rankings, but I know I need to publish in SSCI journals. This is about my own interests, but I know the university would benefit from my publications too. Currently, I would not think much about what the university should do, as my status is low. I am a follower. I would do whatever the university wants me to do (A2).

All in all, it is about the accumulation of academic power and capital. As the core theme of the normative power of rankings is to pit one person's or one institution's performance against all others, the competitive disposition can be concluded by a quote from Bourdieu:

Academic power thus consist in the capacity to influence on the one hand expectations – themselves based partly on a disposition to play the game and on investment in the game, and partly on the objective indeterminacy of the game – and on the other hand objective probabilities – notably by limiting the world of possible competitors (Bourdieu, 1988, p. 89).

### **7.3.2 “Hate”**

Individual faculty members may attempt to resist the normative power imposed by university rankings. They intend to keep independent from the competitive game, although they are aware of the changes brought by the prevalence of university rankings and the emergence of performativity culture. Indeed, while Sauder and Espeland (2009) noted that unremitting surveillance of performance through the use of rankings can bring an obsessive form of internalised control over organisational and individual behaviours, they also recognised that resistance should not be seen as an antithesis but a core feature of the internalisation process. My fieldwork then suggests that the characteristics of resistance can be shown by looking at the personal emotions against the ranking movement and the enduring stability of the academic

hierarchy.

### *The Target of Anger*

Emotion is an important element affecting the formulation of the ranking discourse. As Teichler (2011b) said, “we note a ‘movement’ in favour of rankings by the key producers and advocates as well as a congregation of ‘concerned scholars’ in the critique of rankings” (p. 59). While he sees this as a normal and common practice in higher education reforms, he does not think that the emotions make any intellectual contributions to the clarification of the ranking phenomenon. However, several respondents of my study noted that their ill feelings against rankings or performativity culture are on the basis of their reflections on integrity of academics and respect for and within academia. When a department head from University A was asked about how university rankings have changed the academic work environment for faculty staff in Taiwan, he responded this way:

The present academic situation does not allow much freedom for academics in their personal development. This is what I feel strongest about the changes in recent years. The situation is very different to the time when I just returned to Taiwan. Over a decade ago, as an intellectual in Taiwan, you would be well respected. You could have the space to reflect and develop what you wanted. You could pass your ideas to the next generation. Working in university was a lifelong career. But, university has been changing gradually. Now what you are talking about is only a job. You need to face many evaluations and indicators. It is nothing about lifelong... I am a senior faculty member now. I have no pressure to get job promotion. But, I still need to face the pressure brought by assessments (A1).

He reiterated the importance of “respect” throughout the interview. His view on the one hand can be linked with the issues about academic freedom under the trend of managerialisation and academics’ role in quality assurance (Currie, Petersen, & Mok, 2006; Harman, 2011). On the other hand, his statement can also be understood as an expectation of respective niches of intellectuals in Confucian societies. In fact, the Confucian model of education heavily lies on a social context of inter-human relationships of trust and respect, within which people, especially intellectuals, can sustain and fulfil their humanity through self-cultivation (Cheng, 2006). Hence, while

this understanding of learning and education stresses the importance of self-cultivation, it also reflects that academic circles in the Chinese context revolve around relationships. This point illustrates the importance of context in the use of rankings.

On this basis, a department head from University D queried the usefulness of rankings in improving the quality of higher education in Taiwan, despite recognising the intention of increasing the overall quality of the Taiwanese higher education system through a strong concentration within a few elite universities. “When we decide to adopt Western practices, we need to think about whether they fit our cultural context”, he said (D1). He believed that the trickle-down effect relies on an effective evaluation mechanism, but:

There is a serious problem in Chinese culture. We talk about dignity (*mianzi*)<sup>30</sup> and rely on relationship (*guanxi*). And, I saw this phenomenon (of saving face) in our university evaluation. Some evaluators do not tell the truth because they want to be polite (D1).

There is no evidential basis for his query against the credibility of the evaluation system in Taiwan’s higher education. The value of this remark however is that the emotional responses from the faculty members may undermine one of the foundations of the ranking movement, which perceives that “rankings reinforce virtuous, healthy competition” because “the information on rankings has an overall stimulating effect of increasing efforts to improve” (Teichler, 2011b, p. 60). As a dean said, “the objective of rankings and competition is to provide a platform for us to observe each other, and then to make improvements. However, we should not lose the essence of education and research” (A3). Indeed, many respondents showed their concern about the process of commensuration, by which the process of measurement changes how people think about the notion of quality of higher education (Espeland & Sauder, 2007), even though some of them demonstrated a rather positive attitude toward ranking exercises. For their part, the emphasis on quantitative information in the interpretation of quality means a threat to the nobility of scholarship and education. A department head from University A explained:

Some people worry that we are building an elite university, which is a castle in

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<sup>30</sup> This viewpoint involves the notion of “face” in the Chinese context.

the air (*kong zhong lou ge*) and makes no contribution to our country and society. University A is seen as a leading university because of its contributions to Taiwan, but not its research outputs. We can see our graduates playing the role of leaders in different aspects of the society. But, this part is not shown in any indicators of rankings...

If you do not publish in international journals, you would be identified as a loser in the current system. Many people, including students, feel negative toward this part of rankings. Therefore, when University A entered the world's top 100, students carried a coffin to protest on campus. This represented the death of the spirit of University A (A1).

To rankers and advocates of rankings, this viewpoint can be controversial, especially regarding the irrelevance of rankings in reflecting university's contributions to the society. Nevertheless, it is important in terms of demonstrating the emotional reactions that exist in the public discourse on university rankings.

In sum, it is argued that the emotional interpretations of university rankings by the respondents demonstrate a defence of the conventional notion of the academic nobility, and, more importantly, illustrate the public concern over corruption, which mainly refers to deteriorations of professional standards and ethical loss, in higher education (Chou, 2008; Weidman & Enkhjargal, 2008), particularly in the context of neo-liberalisation, managerialisation and internationalisation of higher education and the growth of the performativity culture in the academic field.

### ***Habitus Fragmentation***

For Bourdieu (1988), the attribute of competition is embedded in the academic circles and determines the allocation of academic capital and power. This imposes a *habitus* in the academic field. However, I argue that there is a *habitus fragmentation* within the differentiated, hierarchical higher education system in Taiwan. Under such a circumstance, some faculty members, especially those working in universities from the lower tiers of the system, thought that they were isolated from the normative influence of the competitive game and university rankings in particular.

According to those interviewed, the relevance of university rankings to them and their institutions depends on the categories and positions of their institutions. For instance, when asked if his university uses the criteria used in ranking systems to guide its development, a dean from University B, a mid-level university, replied, "To

be frank, we have a long way to go before entering the world rankings. Thus, though rankings do have some impacts on us, their influence is not as serious as expected” (B2). He continued to explain that although there is no such formal category as a “research-oriented university”, individual HEIs would have a position in the higher education system. He put it:

For example, while NTU would position itself as a research-oriented university, outsiders would see it as a research university too. Other universities would also give themselves a position, but it could be controversial. Different stakeholders might have different views on which categories a university belongs to. Since there is not a formal categorisation, the positioning of a university is always open for discussion. However, the positioning of an institution would eventually affect the direction it would go toward. This would also decide its views on rankings (B2).

As explained in Chapter 5, whilst many respondents agreed that there is an emerging rankings discourse intensifying the competition between HEIs and even among faculty members within institutions, quite a number of them, especially those from the non-prestigious universities, think that they and their institutions are not significantly affected by the discourse. As a faculty member who chaired a research institute from University D said:

Those universities stress that they are research-oriented and hence want to pursue higher ranks in league tables. Their faculty members need to work very hard to produce papers... However, my university only compares with itself, but not with other institutions. Every department (of the university) has a clear goal of development. We develop our curriculum under this goal in order to pass the MOE’s evaluation. We do not have to compete with other universities. We do not need benchmarks and being ranked (D4).

Another respondent from University E focused on the trend toward internationalisation in the ranking discourse. While he recognised that attracting international students and faculty staff as well as publishing in English in international journals are important criteria used in rankings, he denied that these ranking criteria made any implications for the development of his university. For him, these are

considerations for top-tier universities:

Those institutions in the upper tier, such as National Taiwan University, National Tsing Hua University and National Chiao Tung University, might be under pressure to internationalise themselves... But, local trend is more important to us. Internationalisation, for us, means organising exchange programmes only. In fact, internationalisation is far away from us (E2).

This emphasis on self-fulfilment reflects a perception of rankings, in which ranking criteria, namely “research performance” and “internationalisation”, are only relevant to those HEIs with ambitions to pursue a higher rank in ranking exercises. For these respondents, the ranking criteria do not necessarily represent the notion of quality. To a certain extent, this challenges the observations on the trend toward homogenisation in higher education imposed by the so-called global hegemony and institutionalised by global university rankings (Lo, 2009, 2011; Stensaker & Kehm, 2009b). Nevertheless, here I am more interested in looking at the resistance generated by the hierarchical and differentiated structure of the higher education system. Two insights from the existing literature are useful to explain this phenomenon.

First, it is argued that the responses from the interviewees largely are determined by their organisational identity. According to Elsbach and Kramer (1996), there is a strong connection between the self-understanding of organisational members and the organisation’s identity. Their study reported that university ranking is an important variable changing or reshaping the core organisational identity of members of an HEI. However, the findings from my fieldwork suggest that the conventional hierarchical settings of the higher education system still play a key role in identity management. Thus, the faculty members’ attention to the aspects of performance and the perception of their identities are decided by the conventional hierarchical structure rather than university rankings. In other words, the effects of rankings on identity management are diluted by the organisational categorisation process imposed by the hierarchical structure.

Second, there is the effect of self-fulfilling prophecy. For Merton (1948), a self-fulfilling prophecy is a “dynamic social mechanism” and an “unintended consequence”. It is “a *false* definition of the situation evoking a new behaviour which makes the originally false definition of the situation come *true*” (quoted from



Espeland & Sauder, 2007, p. 11). But, Espeland and Sauder (2007) redefined “self-fulfilling prophecies as processes by which reactions to social measures confirm the expectations or predictions that are embedded in measures or which increase the validity of the measures by encouraging behaviours that confirms to it” (p. 11). They then argued that “rankings create expectation” about HEIs, and faculty members “change their behaviour accordingly” (pp. 11-12). However, in this study, we see that the expectations created by university rankings mainly influence faculty members from prestigious universities (e.g. University A) and somewhat those from mid-level universities (e.g. Universities B and C). Faculty members from the bottom-tier universities (e.g. Universities D and E) tended to define their situation based on their conventional perception of the organisational identity and the hierarchical structure. Hence, the lines of distinction produced by and the reactivity of rankings are subtle in this part of the higher education sector in Taiwan.

This section suggests that the effects of the normative power of rankings are subtle in some parts of the higher education system in Taiwan. This is because the conventional hierarchical structure imposes another set of expectations and discourse shaping the normative environment in universities. This situation can be seen as a normal circumstance in the field of “game playing”. As Bourdieu (1988) said:

As in the field of power or in the university field taken as a whole, here too there is no absolute domination of a principle of domination, but the rival coexistence of several relatively independent principles of hierarchisation. The different powers are both competitive and complementary (p. 113)

The significance of this finding is to demonstrate the stability of the traditional hierarchical settings that create or retain a set of dominant principles competing with the set of dominant principles generated or represented by university rankings. This observation is important in terms of illustrating the coexistence of convergence and divergence in Taiwan’s higher education.

## **7.4 Conclusion**

This chapter somewhat puts a query against the studies stressing the significant impacts of university rankings on organisational and individual behaviours in higher

education (e.g. Espeland & Sauder, 2007; Sauder & Espeland, 2009). However, it does not mean to challenge the powerful discourse imposed by the synthesis of the image of the global research university and the dream of joining the world's top 100. In contrast, the findings concerning the "love" side have proven considerable effects of the normative power of university rankings on faculty members' behaviours and attitudes in Taiwan's higher education, especially those from the upper-tier universities.

The value of the findings, which are summarised as "hate" in the current public discourse, is to demonstrate an understanding of university rankings in which manifestations of the normative power of rankings are related to or even grounded on policy elements and hierarchical settings. Seen in terms of the dialectic of the global and the local, the responses from the lower-tier universities show a clear distinction between global and local in the normative environments in Taiwan's universities. The dichotomisation shown in the findings can be good evidence to support a query about the optimistic prospect of a strong connection between local communities and the elite universities' advantage of global access to the world's knowledge network (Gallagher, 2011; Yonezawa, 2011), and to demonstrate a hypothesis of inequality, in which elite universities play a role of serving the global society and global markets, while non-prestigious universities are under threat from marginalisation in the world of globalisation.

## Chapter 8

### Dimension 4: Openness and Closeness of University

#### Rankings and the Relation to Post-colonialism

##### 8.1 Introduction

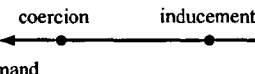
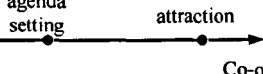
In Chapter 6, we have examined how university rankings can be used to promote national interest in global higher education. This chapter turns to discuss an antinomy of university rankings by viewing rankings as an institution projecting forces of change in the global landscape of higher education, with particular reference to the development of Taiwan's higher education. This understanding illustrates Dimension 4 of our four-dimensional framework, in which rankings have two distinctive sides: *bright side* and *dark side*. To reveal the bright side, the chapter argues that the emphasis on global university rankings in Taiwan's education policy is a way of enhancing the quality and visibility of Taiwan's universities in the globalised world of higher education. However, the chapter also challenges the foundation of the vision of "world-class worldwide" through illustrating the hegemonic feature of the world-class movement, thereby demonstrating the dark side of global league tables.

##### 8.2 Institution: An Approach

I view global university rankings as an institution in the geo-politic of higher education (Lo, 2011). This is an approach to examining the function of rankings in the study of power relations in global higher education. The approach is based on my conceptualisation of international politics of knowledge production, which aims to overcome: an overemphasis on the hegemonic nature of the dominance of western paradigm in higher education; a predominant view that non-western countries are considered as the colonised in the process of globalisation; and an uncertainty about the interplay between core and peripheral nations in higher education in the post-colonial era. As captioned in Chapter 2, I used the typology of power in Nye's theory

to deconstruct the discursive basis of global governmentality.<sup>31</sup> Adopting such a soft-power perspective on power in higher education, different forms of power in higher education are ranged along a continuum that illustrates different power resources and their adaptation to higher education (Figure 8.1).

**Figure 8.1: Power in higher education**

	Hard Power	Soft Power
Spectrum of Behaviours		
Most Likely Resources	<div>force sanctions</div> <div>payments bribes</div>	<div>institutions</div> <div>values culture policies</div>
Translation in Higher Education	<div>role differentiation</div> <div>funding</div>	<div>global university rankings</div> <div>world class image</div>
Scope of Influences	National	Global

Source: Lo (2011, p. 214).

The figure illustrates a perspective from which a world-class image is seen as a type of resource producing co-optive power in higher education that forms the end of the spectrum of behaviours in the analysis of power in higher education. This perspective chimes well with an analysis by Deem et al. (2008), which suggests that owing to the intensifying competition between higher education sectors, countries in East Asia are attracted by the world-class image originating from the Anglo-American paradigm, therefore try to learn or even copy the western-based world-class model in order to restructure their higher education systems. In fact, many countries in East Asia as well as other parts of the world have put much effort in establishing world-class universities in their territories (Altbach & Balán, 2007; Liu et al., 2011). The emerging quest for the world-class status across the globe to a large extent reflects that this form of soft power is viewed as an attractiveness generating impacts on a global scale.

Furthermore, adopting the soft-power perspective on the geo-politic of higher education leads us to pay special attention to the emerging global university rankings

<sup>31</sup> Coined by Nye, the term “soft power” refers to the ability of changing others to do and shape what they want (Nye, 1990, 2002). He notes that “soft power is not merely the same as influence... it is also the ability to attract, and attraction often leads to acquiescence” (Nye, 2004, p. 6). Based on this concept, he develops a spectrum of power, in which behaviours range along from command that enacts hard (commanding) power at one end to co-option that enacts soft (co-optive) power at the other, and corresponding behaviours/sources (pp. 7-8).

in the dialectic of the global and the local. It is argued that global university rankings provide the function of “institutions” along Nye’s spectrum of resources of power. According to the World Bank (2002):

Institutions are rules, enforcement mechanisms, and organisations... Distinct from policies, which are the goals and desired outcomes, institutions are the rules, including behavioural norms, by which agents interact – and the organisations that implement rules and codes of conduct to achieve desired outcomes (p. 6).

It noted that “institution builders can be diverse – such as policymakers, business people or community members” (p. 6). Therefore, the types of institution can be diverse. There are public institutions (e.g. corporate, collateral and bankruptcy laws) and private institutions (e.g. banks, reciprocity between community members and land inheritance norms). And, “many private institutions exist under the aegis of private institutions” (p. 6). In addition, in terms of generating effects, institutions can be built as either internal or external enforcement mechanisms; and as either formal or informal institutions. No matter what kind of institutions they are, “effective institutions are those that are incentive-compatible” and the design of institutions should ensure that “the incentives that are created actually lead to desired behaviour” (World Bank, 2002, p. 6).

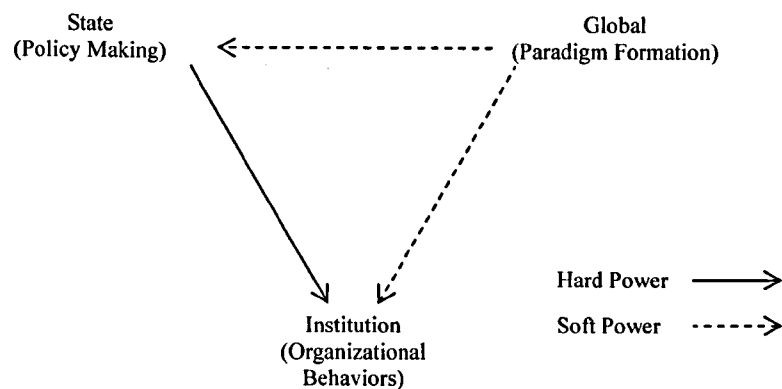
This definition of institution shows that global university ranking can be seen as a mechanism of providing the functions of external and informal institutions that cause significant effects on internal and formal institutions (e.g. funding and evaluation mechanism). With reference to the analysis of power in higher education illustrated in Figure 8.1, it is argued that global university ranking is a missing link that connects the scope of hard power (i.e. local) with that of soft power (i.e. global) by which hegemony and self-determination are able to work within their scopes of influences respectively but interactively.

Taking the ARWU (a ranking system focused on research capacity) and the THE-QSWUR (a composite ranking with a heavy emphasis on reputation survey) as examples, recent studies reported that criteria used in these systems of university comparison have become important considerations in the making of higher education policy and university governance (for example, see Hazelkorn, 2011; Stensaker & Kehm, 2009b). On this basis, we have seen that global university rankings have

become a mechanism of agenda setting, which project a structured form of soft power influencing the higher education policy of many countries and the organisational behaviours of HEIs. Indeed, in Chapter 6, we have discussed that Taiwan or individual countries in general have limitations in deciding their higher education because of the agenda (i.e. rankings in the present study) set by the external parties. In this sense, it is difficult to ignore or decouple from these normative elements of rankings in the world of globalisation.

Finally, the power relations between global and local institutions are noteworthy features of global higher education. As explained in the World Bank's report (2002), there is an interactive nature of the relations between institutions, policies and organisational behaviours. It noted that "policies affect which institutions evolve – but institutions too affect which policies are adopted. Institutional structure affects behaviour. But behaviour may also change within existing institutional structure" (p. 6). This definition is useful for understanding the non-linear mode of interactions in the global-local dialectic. In adding "institution" to make up the soft-power perspective on power in higher education, I have drawn attention to the idea of network in illustrating the power relation in the global context. It is suggested that the exercise of the soft and hard power is not in a linear (i.e. global-nation-institution) manner, but, as illustrated in Figure 8.2, is in a networked form.

**Figure 8.2: Power relations in global higher education**



Source: Lo (2011, p. 216).

The figure illustrates a situation in which soft (global) power and hard (national) power simultaneously influence behaviours of individual HEIs. As argued above, the

world-class image, which generates soft power over states and HEIs globally, is the basis upon which the global paradigm is developed. Then, drawing on the concept of multilateral governance that further specifies the changing role of states in the globalised settings (Castells, 2000b), it is argued that the system-level impact of paradigm formulation is to foster the notion of world-class university and lead to the promulgation of related policy initiatives. At organisational level, on the one hand, individual HEIs are attempting to change their governance and organisational culture and behaviours so as to respond to the global dynamics. On the other, the organisational change is under the control and influence of the hard power exercised by the regulatory agencies at national level.

Based on this understanding of university rankings, the following sections examine the role and influence of ranking systems in promoting openness/diversity and closeness/convergence in the transformation of global higher education in the theoretical context of post-colonialism (Dill, 2009; Marginson, 2009b).

### **8.3 Openness: The Bright Side**

#### **8.3.1 Utilising Rankings to Build World-class Universities**

The soft-power perspective on global higher education shows that the goal of building world-class universities is a powerful force driving the development of higher education in peripheral countries. In fact, the findings of ongoing research on strategies of global research universities in East Asia present that governments in the region play a crucial role in nurturing the growth of world-class universities through upgrading and merging existing universities or creating new universities (Salmi & Liu, 2011, p. xi). From the national perspective, the global research university is “a central institution of the 21<sup>st</sup> century” as being “at the nexus of science, scholarship, and the knowledge economies” (Altbach, 2007, p. 1). This statement gives an indication of how elite universities, or world-class universities in a global context, are essential in promoting national interests in the knowledge economy.

To sustain the competitiveness of a nation in the knowledge economy, it needs a critical-mass of few better-funded institutions that act as global players, while there is a subsector of less research-active HEIs for mass higher education within the national higher education system (Palfreyman & Tapper, 2009). In this sense, building and

remaining a “world-class” university, according to Watson (2007), is a way of sustaining the comprehensiveness of a higher education system. On the one hand, this rationalises the policy of role differentiation, which has been discussed in Chapter 5. On the other hand, it figures out the importance of defining the notion of “world-class” university. This is because “Everyone wants a world-class university. No country feels it can do without one... Everyone... refers to the concept” (Altbach, 2004a, online document).<sup>32</sup>

University rankings then are considered as an effective and efficient way of projecting the world-class image for HEIs to guide their development. As Salmi and Liu (2011) said, “With the proliferation of league tables in the past few years...more systematic ways of identifying and classifying world-class universities have appeared” (p. x). Indeed, my fieldwork reveals that many respondents believed that there is a close connection between the position in ranking exercises and the status of world-class university. For example, a faculty member from University A accepted that reaching the world’s top 100 is an effective indicator of achieving world-class status. She specified the criteria of a world-class university:

When we talk about the concept of world-class university, we should look at both hardware and software. A world-class university should have a campus with good facilities... We should also consider the performance of students and teachers. Only a good university can attach good teachers and students... Lastly, world-class universities normally are comprehensive universities with sufficient budget (A5).

She believed that many of these criteria are included or reflected in different ranking systems, and that the pursuit of better performance in league tables is correct in terms of moving toward the world-class status.

A faculty dean from University B held a similar view and opinion on this issue. He assumed that there is “an obvious relationship between the world’s top 100 and the status of world-class university, as many ranking systems can reflect the research capacity and performance of HEIs effectively”. He believed that while some existing ranking systems overstress publishing articles in the international publication outlets

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<sup>32</sup> Altbach (2004a) has made his own definition by listing several criteria, including excellence in research, academic freedom and an intellectually stimulating environment, internal self-governance by academics, stable and substantial funding.



and overlook the importance of local dimensions, “there is a consensus on the worldwide higher education landscape and development in the academia”. This is because “the level of academic research is an indicator of national power”. Hence, in his view, it is normal and reasonable that universities from strong countries would perform better in league tables. Based on this, he believed that:

Universities in Taiwan are able to do better in ranking, because the island-state is not weak in knowledge production. Its universities are considered inferior to their counterparts in the West owing to the dominance of English and the low level of internationalisation (B2).

He hence noted that if HEIs in Taiwan could further internationalise themselves, their performance in the rankings would be much better, thereby reflecting Taiwan’s strength and competitiveness more precisely. This viewpoint substantially shows the importance of internationalisation in the transformation of higher education.

### **8.3.2 Internationalisation of Higher Education and Rankings**

The policies of climbing league tables and building a world-class university play an important role in enhancing Taiwan’s visibility in the global higher education market. As I have argued elsewhere, internationalisation has a strong link with the pursuit of a higher rank in global league tables because, on the one hand, the degree of internationalisation is a criterion used in THEWUR and QSWUR; on the other, the trend toward internationalisation means an active participation in the global academic community, therefore involving the pursuit of a validation of the international stature (Lo, 2009).

Therefore, in recent years, the island has attempted to extend its role in international education (CEPD, various years). In 2003, the Taiwanese government put the task of increasing the population of international students in its National Development Plan. In 2004, the MOE launched the Program for Expanding Overseas Student Population, a subsidy scheme providing financial incentives for universities to encourage them to recruit more international students. The scheme targets to increase the number of foreign students admitted to degree programmes to 12,830 by 2011. The amount of the subsidies granted thus depends on the number and the status of international students. Generally speaking, the subsidies brought by students studying

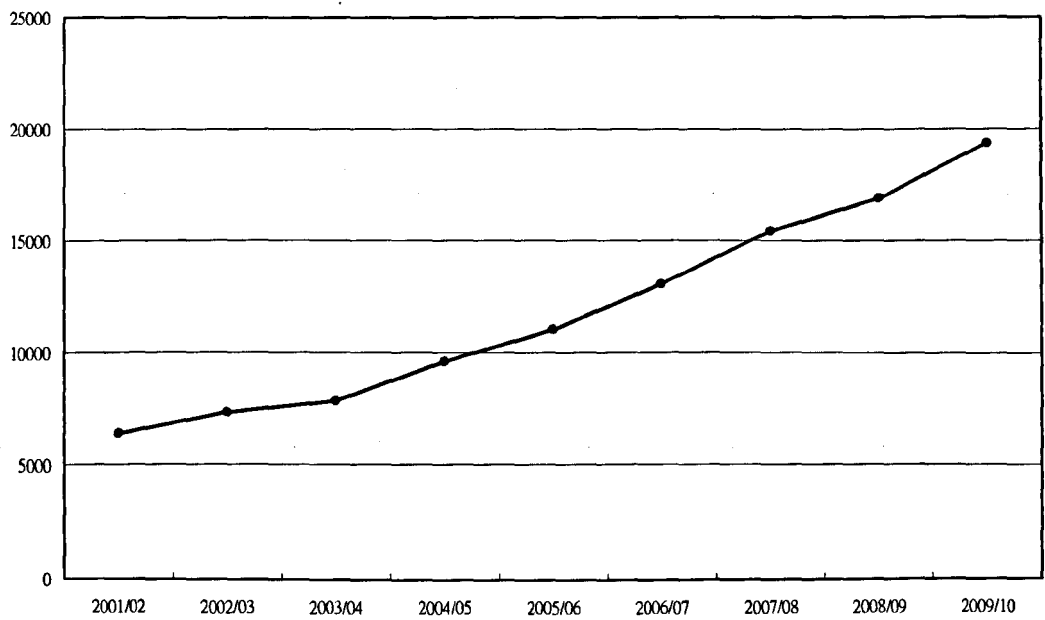
in degree programmes would be more than those brought by students admitted to exchange and Chinese language programmes (MOE, 2007a). In addition to subsidising universities, the MOE incorporated the number of international students as an indicator to assess public universities in its assessment exercise. For private institutions, the number of foreign students also affects the funds they obtain from the government, since the figure is taken as a consideration in the government's review of its policies on private education.

Furthermore, the government also offers scholarships to attract international students. For instance, four governmental agencies, namely, Ministry of Education, Ministry of Foreign Affairs, Ministry of Economic Affairs and National Science Council, jointly launched the Taiwan Scholarship Program, which grants foreign students at both undergraduate and postgraduate levels with a monthly stipend of NT\$25,000–30,000. Meanwhile, the MOE has also provided scholarships to international students studying Mandarin in Taiwan since 2005 (MOE, 2008). Moreover, many higher education institutions have established their international student offices to provide support to overseas students on various matters like visa application and extension so as to formulate a friendly learning environment (MOE, 2008). To promote Taiwan's education abroad, the MOE has also organised Higher Education Fairs in Vietnam, Thailand, Malaysia, Canada, and the US since 2004 (Song & Tai, 2007).

To cultivate a friendly learning environment that welcomes international students, the MOE also tries to internationalise the curriculum by promoting English as the medium of instruction. A number of universities such as National Taiwan University, National Chengchi University and Yuan Ze University are encouraged to offer English-taught courses. Around 115 courses at both undergraduate and postgraduate levels have adopted foreign languages, mostly English, as the medium of instruction in 30 colleges and universities in 2005. At the same time, some institutions have started to provide twinning programmes in collaboration with overseas institutions from English speaking countries, like the US, the UK and Australia (Song & Tai, 2007). With the government's initiatives, the number of foreign students has grown significantly in recent years. Before the launch of the Program, there were 7,331 foreigners studying in Taiwan in the 2002/03 academic year. The number has grown to 19,376 in 2009/10, over a one-fold increase. As shown in Figure 8.3, there was a significant increase of international students in Taiwan in a decade (MOE, various

years).

**Figure 8.3: The number of international students in Taiwan, 2001/02–2009/10**



*Source:* MOE (various years).

While these policy changes reflect that Taiwan is trying to strengthen its international links with the global academic community and to advertise its higher education globally, university ranking is considered to be a crucial factor fostering the trend toward internationalisation (Cantwell & Maldonado-Maldonado, 2009; Lo, 2009). A faculty member rightly pointed out that internationalisation and rankings may mutually influence each other because good performance in rankings can help draw the attention of the overseas students and academics, and consequently may attract more international students and faculty staff to study and work in Taiwan’s HEIs. In return, achieving a high degree of internationalisation is a way to climb some league tables, such as the THEWUR and QSWUR (B3). Moreover, in the process of internationalisation, university ranking is useful to identify Taiwan’s role in the global higher education system. As an interviewee remarked, the ‘five-year-fifty-billion’ program and internationalisation are important policies, which have changed the situation of isolation that Taiwan was in. He said, “Taiwan is not the best, but also not the worst. We are in the middle. Our students should go to the West to learn the advanced technologies and ideas, and bring them back to Taiwan. Meanwhile, Taiwan

can play a role of cultivating students from Southeast Asia... These students can learn useful techniques and knowledge from Taiwan to build their countries. At the same time, Taiwan's influence can increase in these places" (D3).

### **8.3.3 The Narrative: World-class Worldwide**

The policies and viewpoints above represent a perspective from which Taiwan needs to participate in the global academic community more actively by adopting the global standards and paradigms, and using university ranking as a tool to govern its higher education system and pursue the world-class status, because, as argued by Altbach (2007), "involvement in world science means, in general, adherence to established research paradigms and themes". He noted that it is not practical to "build an infrastructure that permits research on local or regional themes if a university wishes to join the 'big leagues'" (p. 16). He therefore stressed the importance of the global academic network in terms of facilitating worldwide exchange of personnel, technologies and knowledge. Mohrman et al. (2008) also advocated the promotion of global visions among research universities. They proposed the Emerging Global Model (EGM) that allows these elite institutions and their staff and students to join the global competition actively. These EGM universities are characterised by several features that focus on promoting a high level of internationalisation (see Mohrman et al., 2008, p. 8 for details). They suggested that:

These top universities look beyond the boundaries of the countries in which they are located to define their scope as trans-national in nature. Their peers span the globe... there may be only a few dozen fully developed EGM universities but they are the institutions that head virtually every list of leading universities worldwide (p. 6).

These perspectives reflect a logic that elite HEIs should be disembedded from their national systems, be assigned to play the role of global players and become a business of producing global public goods because national interests in this aspect mainly lay on obtaining intangible benefits through prestige building. It is expected that the global prestige would bring talents, knowledge and technologies in the long run, thereby enhancing the research capacity of the university sector as well as the industrial sector. This would in turn benefit the country in terms of enhancing its

competitiveness in the knowledge economy (Marginson, 2007b; Mathews & Hu, 2007; Palfreyman & Tapper, 2009). Thus, despite the direct benefits brought by a world-class university being rather unobvious, different nations and territories, including Taiwan, are keen to build one or more.

To sum up, a suite of developments in higher education writes a story, which stresses that higher education is important to national development, especially in the age of knowledge; and that to sustain their competitiveness, the peripheral states need to be actively involved in the global academic community through establishing world-class universities and internationalising their HEIs. University ranking here is useful and essential in terms of navigating the way to achieve these goals. This narrative addresses that in the long run, the developing countries would be able to establish their own world-class universities, thereby altering the conventional centre-periphery landscape of higher education and enabling them to compete with the core states. This narrative exactly fits the future mission of university proposed by Scott. As he put it, “Today, rapid globalization and postmodern society point toward a future *internationalisation* mission for the university as a service to the body of worldwide nation-states” (Scott, 2006, p. 33, emphasis in the original). All these project a way toward a world of post-modernity, post-coloniality and multi-polarity.

## **8.4 Closeness: The Dark Side**

### **8.4.1 The Queries about “World-class University” and “Internationalisation”**

The anticipation in the previous section is developed based on a belief that there is a “neutral” notion of world-class university, which does not favour any specific higher education paradigm. Different authors focus on three major aspects, namely talent, resources and governance, in their definitions of a world-class university (Altbach, 2004a; Niland, 2000, 2007; Salmi & Liu, 2011). They do not see a specific higher education paradigm in the “core nations” as a role model. However, as mentioned in the previous chapters, the academic circles from the peripheral countries have heavily blamed the call for building world-class universities for the paradigm shift in higher education, by which the Anglo-American paradigm has dominated the discourse on the concept of world-class university and the process of internationalisation, thereby resulting in the emergence of “a new dependence culture” (Deem et al., 2008, p. 93).

In light of this analysis, global university rankings have become an institution upholding “hegemony” in the international order. My fieldwork revealed that these queries about the quest for building a world-class university on the basis of global university rankings are echoed by faculty members in Taiwan, despite the fact that, as reported earlier, several respondents agreed that ranking is useful to guide the development of Taiwan’s higher education. Some respondents mentioned that being ranked high in league tables cannot truly reflect the notion of a world-class university. For example, a department head from University A remarked that:

Those indicators (used in rankings) have their meanings. But, they should not be considered equal to world-class status. There are reflections on this issue in our society. People, including officials from the MOE, might have different views toward ranking. They have to think about what the essence of education is (A1).

He believed that “the essence of education is to provide opportunity for everyone to develop themselves”, instead of being the world’s best. In this regard, he noted that good education is not to conduct research and produce papers only, but also to provide opportunities for different social classes so as to improve people’s lives. He further queried the values and relevance of the world-class university to the development of the Taiwanese society:

If so (focusing on doing research and producing publications only), the true basis of social concern will be lost. This is what I am worrying. If we look at Taiwan’s history, we know that Taiwan did not have a top university. But, it could still develop from a poor society into a relatively well-off one. Based on these historical evidences, despite that we are facing many challenges, we should query the importance of being the world’s top... Although Taiwan’s higher education did not enter the world’s top 100, it had cultivated many talents for the economic development. This fostered the economic growth of Taiwan in the post-war period. This fact leads to a question: What is the significance of building a world-class university for our society? (A1).

Several comments about the quest for a world-class university from those interviewed also capture the importance of local vision and social accountability to higher education in the process of internationalisation:

A world-class university should be evaluated based on the contributions of its faculty members and alumni to the national development. This is not about technological or knowledge innovation only, but also about how much the contributions made by the institution and its people to the nation and society. Such contributions can be about fostering changes in technology or social system. If the impacts on the society can be reflected in university rankings, like the ARWU, it should be much more influential. In this scenario, ranking is no longer merely about academic outputs. It may include alumni's participations and influences in social movements, their contributions to the economic planning and development, their participations in the political reforms and democratic progress, their contributions to enterprise development and innovation, their contributions to the public, private and third sectors. All these are related to the national and social development (A3).

I think a real world-class university is not based on the research performance of its faculty members, but on the students' enjoyment of teaching. If every teacher can teach seriously, the competence and competitiveness of the students will be good. They therefore can find good jobs and perform well. Then, they will be recognised by the society and the employers. This will bring good reputation to the university, and will plausibly help its performance in ranking as well... In addition to job performance, (a world-class university) needs to nurture right moral values in the students, to tell them what appropriate behaviours are in the society. In general, from my view, the essence is to teach the students to be good citizens. This is more important than being ranked in the world's top 100 (C3).

The status of a world-class university is determined by whether or not it can cultivate influential people who can contribute to the society or human beings... I think the contributions (of an institution) to its community or local economy should be considered when universities are ranked. When I was a student, National Taiwan University followed by National Tsing Hua University, National Chiao Tung University and National Chengchi University were the major institutions that had a very good reputation in the society. But, in recent years, National Cheng Kung University has gained a good reputation as well because its graduates have done very well in the society and are welcomed by employers. I think this reflects how reputation is relevant to the performance of a HEI (C4).

These views stand for a confrontation with the phenomenon of “phasing the local dimensions out” (Lo, 2009, p. 738). This phenomenon not only reflects that the trends toward internationalisation and performativity culture brought by university ranking would become a threat to the quality of teaching (as we have discussed in Chapter 5), but, for some, also mean a corruption of the traditional scholarship and indigenous culture. Some of the interviewed Taiwanese academics expressed their concern over the declining role of (elite) universities in nation-building and national development. This leads to a challenge of how to balance the global and local dimensions in the global age, which is faced by many societies, including Taiwan (see Jones, 2008; Lo, 2009; Marginson & Rhoades, 2002 for possible solutions).

More importantly, these views also reflect a resistance to a dimension of globalisation in which “‘the global’ is conceptualised as external, universally transcendent, and beyond whereas ‘the local’ is understood as particular and subordinate to the global” (Cantwell & Maldonado-Maldonado, 2009, p. 303). Different to the opposed discourse on ranking in which the developing world is attracted by the image of world-class manifested in the western discourse and therefore proactively pursue internationalisation and world-class university, in this side of ranking, the nature of “the global” and the call for “the world-class” are oppressive and the developing countries are in a passive position (Lo, 2011).

#### **8.4.2 The Positional Competition**

Prestige building is an essential part in global competition of higher education. As mentioned in previous chapters, university prestige may have more influence over students’ choice than the quality of the institution because higher education is somewhat a positional good (see Adnett & Davies, 2002; Hirsch, 1976; Hollis, 1982). In this regard, it is important to consider the positional characteristic of higher education when discussing the global hegemony in higher education.

According to Hirsch (1976), higher education is a producer of positional goods that provide access to social status and income earning. Moreover, such positional advantages are conferred only on some by denying them to others. This means that to a large extent the positional competition is a zero-sum game because “what winners win, losers lose” (Hirsch, 1976, p. 52). The zero-sum nature of positional competition highlights the significance and usefulness of university ranking in promoting status and prestige in both national- and institutional-competitions. As pointed out by Geiger



(2004):

Prestige ought to reflect quality, but far more is involved. As a function of consumer awareness, prestige is affected by the entire manner in which selective institutions market themselves and how they are treated in the media. Specifically, rankings advance their own definition of prestige, creating a 'positional market'... The positional markers in this competition... are measures of selectivity, costs, or rank (pp. 167-168).

In addition, there is a circular effect that leads to the reproduction of status and reputation in a positional market where:

Producer universities compete for the custom of preferred 'customers', students with the highest entry scores. Student 'customers' compete for entry to preferred institutions. Prestige sustains high student scores, competition drives them higher, and scarcity reproduces the prestige of the elite universities (Marginson, 2006, p. 5).

It is argued that the logic of positional good can be applied in international competition in higher education. Students from peripheral countries are attracted by the prestigious status of the education systems of the core states, because this status is considered to be scarce in their countries. Thus, for many international students, the value of study abroad is relative rather than absolute. The brain drain to the West then has somewhat caused the circular effect above. In this regard, the international competition in higher education is a zero-sum game. And, the emergence of global university ranking systems has fostered the positional competition between different higher education systems, thereby creating winners and losers. According to this view, the global North-South inequalities, as argued by Badat (2010), is reinforced by the global ranking systems. And, the global South is the loser in this positional competition, as the "gold standard" promoted by these ranking systems has driven the public scrutiny of HEIs to the particular direction. This results in the "North Atlantic domination", which has led to the rise of Americocentrism and Eurocentrism within non-English speaking contexts (Keim, 2010).

Following this logic of positional competition, the pursuit of a leading role in global educational discourse is important for developing countries to change their

inferior position in the global higher education system. As observed by Robertson (2010), enabling Europe to play a more advanced role in global higher education through promoting a European normative framework and normative power is one of the major goals of Europeanisation, thereby counterbalancing its alternative, US norm. In this sense, the Taiwanese use of university ranking proposed in Chapter 6 can be understood as a way to institutionalise Taiwan's discursive power, thereby competing for normative leadership in the academic world. We might read this process of institutionalisation of discourse as a counter-hegemonic practice against western hegemony. Nevertheless, as I have argued elsewhere, "the end of the western hegemony in higher education may not mean the end of dominance, but the emergence of a new hegemony" (Lo, 2011, pp. 218-219). This is particularly true if we take the positional character of educational goods into consideration. Then, one important question remains as to whether the "counter-hegemonic" perspective on global rankings can guide us to achieve a more equal and diverse academic world.

#### **8.4.3 The Narrative: Global Hegemony**

Undoubtedly, globalisation has significantly influenced higher education worldwide. The bright side above looks at the opportunities for facilitating academics, students and HEIs to actively participate in the global academic community through intensified cross-border activities. The dark side however focuses on the hegemonic nature of these global practices and standards. With regard to league tables, it is argued that world university ranking is a form of imperialism and plays a role in institutionalising and enacting these global models (Deem et al., 2008; Teichler, 2011b).

By using Gramsci's concept of hegemony, Marginson (2008) noted that there is a global or American hegemony in global higher education. The concept of "the new imperialism" by Harvey (2003) then further illustrates the attribute of hegemony in higher education. For Harvey, empire in the post-war period refers to "the ways that economic power flows across and through continuous space, towards or away from territorial entities (such as states or regional power blocks)" (p. 26). In the context of proliferating neo-liberal ideology and its policy adaptations, the "form of power is associated with the actions and interests of transnational corporations (TNCs), the workings of global financial markets, the development of new forms of production based on new technologies and the globalisation of the labour market" (Tikly, 2004, p. 174).

This transnational characteristic of “the new imperialism” distinguishes it from classical colonialism characterised by country-to-country occupation. On the one hand, the term “the new imperialism” reflects the continuing legacy of European imperialism and colonialism in the global age. Though the political and cultural predominance of the West now is exercised in a rather circuitous way, “the new world order is premised on western hegemony” (Tikly, 2004, p. 175, also see Harvey, 2003). This characteristic of deterritorialisation makes the two terms, “global” and “western”, equivalent in the global context. On the other hand, the concept vividly addresses the changing role of nation-state in a post-national geography (Appadurai, 1996, 2003). As Tikly specified (2004), “dominant global economic interests are to a lesser extent identified with nation states, or even with elites within nation states, but are increasingly transnational in their composition” (p. 176). This analysis illustrates that the domination of “the global” or “the West” is based on “discursive terrain”, instead of “territorial terrain” in the global age.

The increased importance of publishing in English is an empirical evidence for supporting this argument of emerging western hegemony in the form of discursive terrain because, as reiterated in this study, “Asian social science scholars are motivated to publish in the English language, to communicate with a wider audience and to build strong publication records for internal evaluation or to improve university standings in the rankings” (Ishikawa, 2009, p. 170). However, as argued by van Raan (2010), national orientation arguably plays a more important role than international orientation in social sciences because:

in the social sciences, the meaning of citations may differ from that in the medical and natural science fields. Publication practices in the social sciences are less standardized than those in the medical and natural science fields. International peer-reviewed journals are less important than in the exact sciences; the written scholarly communication system’s structure often does not show a clear core-periphery structure; and English is not always a dominant language. Journals may even be multilingual (van Raan, 2010, p. 237).

Kratoska (2007) expressed the same view on the issue in his essay on the expansion of Asian tertiary education during the post-war period. He noted that there is a correlation between the rapid growth of Asian higher education and the increase

in the quantity of academic material published in Asian languages. In his view, this represents that “Asian languages and first-hand knowledge of local societies became an essential feature of research”; and that “social science research on Asia shifted from the activities of the West in Asia to the activities of the people of Asia” (p. 6). Therefore, the pressure to publish in English caused by the prevalence of global university rankings would probably smother the nascent scholarship in non-western, especially developing, societies (Ishikawa, 2009; Kratoska, 2007). In the case of Taiwan, as shown in the quotes above and in previous chapters, many of the interviewed Taiwanese academics expressed this concern.

In a deeper sense, it is argued that the discourse about “development” is a means of promoting the western hegemony in the post-colonial, global age. Tikly’s (2004) analysis is instructive for understanding the forms of hegemony in the post-independence settings. He used the rationalities and programmes of the World Bank as an example to illustrate that the West is extending its control and dominance through the translational governance framework of development agencies. Using Foucault’s concept of governmentality, he argued that the western hegemony has disciplinary rather than political rationales in nature (also see Cantwell & Maldonado-Maldonado, 2009). More importantly, Tikly reviewed the key organizing concepts in relation to “development”, and pointed out that the terms and ideas about “development” are principally western-based (also see Rist, 1997; Tucker, 1999). His analysis shows the discursive basis of the new imperialism, on which the West is able to forcefully influence or even control other nations and societies through defining “developed” and “underdeveloped”, and through classifying places as developed or underdeveloped ones. In such a development discourse, becoming more “developed” means more “westernised”. According to Tikly (2004):

‘development’ is ... a central organising principle of the entire western *episteme* including the discourses of anti-colonial activists who have, given the hegemonic nature of the development discourse, largely been obliged to struggle within its discursive boundaries... whereas development had in the past been a ‘natural’ phenomenon, in the new hegemonic worldview, development took on a transitive meaning, that is, it became something that could be performed by one actor or region over another actor or region (p. 181, emphasis in the original).

As a consequence, the non-West is controlled by the discipline of development, and therefore by the West.

This argument challenges the foundation of the bright side, that is, the facilitating and nurturing role of higher education in national development. From the anti-colonial perspective, the bright side of global university rankings is still hegemonic and imperial in nature. Although it might guide the non-West to depart from the old forms of European colonialism, it has brought the new imperialism that consolidates the inequality between “developed” and “underdeveloped” manifested in the western discourse. This is the dark side of university rankings.

## 8.5 Conclusion

Inclusive as it was within, Rome drew its potent unity also from Othering the barbarian outside. There is no Outside in a world society. We have reached the planet’s edge. Moreover, inside its perimeter, Rome’s dominance of mental and social forms was complete. Plural as it was, there was only one civilization in the Empire. That is not the world we now inhabit (Murphy et al., 2010, p. 242).

For me, this quote, on the one hand, illustrates the foundation of the dark side above; on the other, makes a standpoint against it. From this perspective, any dichotomous approach to understanding the world society is fundamentally colonial and imperial in nature, no matter what pair of terms like *superior* and *inferior*, *core* and *periphery*, or *developed* and *developing/underdeveloped* are used in the discourse.

In my view, there is no doubt that global university rankings are practical ways to reform or even transform the higher education sector of the non-West. Besides, “Interpretations of Rome differ according to where one sits” (Murphy et al., 2010, p. 242). The openness to outsiders (or being included in the Empire), for some, is a move toward a better future. However, while we appreciate the borderless opportunity brought by globalisation, we might want to query the basis of cosmopolitan identification and globally oriented subjectivity (Matthews & Sidhu, 2005). In other words, before we embrace the development discourse embedded in the bright side, we might need to ask whether there is a non-biased, undistorted version of development or it is just a way of bringing the Outside in.

## **Chapter 9**

### **Conclusion**

#### **9.1 Introduction**

This thesis set out to examine the implications of ranking systems for higher education in the Taiwanese context. In doing so, it explores how the Taiwanese higher education sector has been influenced by the ranking movement, and investigates the link between rankings and Taiwan's interests in global higher education. The thesis also aimed at generating a theoretical understanding of the ranking phenomenon. This chapter concludes the whole dissertation by summarising and reshaping the findings presented in the early parts. It begins with an analysis of the key findings of the thesis, thereby revealing contributions of the study. It then turns to some theoretical reflections to link the empirical analysis with the existing conceptual literature. It also provides a section of methodological reflections reflecting on the experience of adopting a qualitative approach to sampling, data collection, and analysis in this thesis. Based on these theoretical and empirical elements, the final part outlines some directions for future research on rankings and relevant areas.

#### **9.2 Key Findings of the Thesis**

We have reviewed a plethora of evidence relating to the ranking movement and its implications for Taiwan's higher education. The data presented in the preceding chapters situates my research questions in the context of both ecology and geography of higher education. From an ecological perspective, we have learnt that while university rankings have caused impacts on government policies as well as organisational and individual behaviours in the Taiwanese higher education sector, the extent of these ranking effects on policies and behaviours somewhat are determined by the academic hierarchy, a prestige structure. From a geographical perspective, we have recognised that global university rankings are related to national competitiveness

and higher education development in the world of globalisation. We are aware of the opportunities brought by rankings and the imposition of imperialism through rankings. Listed below (Table 9.1) is an index of the four dimensions and corresponding issues discussed in the preceding chapters. To exemplify the finding of this four-dimensional analysis of rankings, it is useful to see the four dimensions as making up two clusters in which the two ecological dimensions (Dimensions 1 and 3) are on one side; the two geographical dimensions (Dimensions 2 and 4) are on the other.

**Table 9.1: Index of dimensions and corresponding issues**

	Technological	Conceptual
Ecological	<i>Dimension 1</i> Responses at: <ul style="list-style-type: none"> <li>• systemic level</li> <li>• institutional level</li> <li>• individual level</li> </ul>	<i>Dimension 3</i> Seen in terms of a faculty member's degree of acceptance: <ul style="list-style-type: none"> <li>• "love" – embrace</li> <li>• "hate" – resistance</li> </ul>
	<i>Dimension 2</i> Using rankings as: <ul style="list-style-type: none"> <li>• a governance tool</li> <li>• a zoning technology</li> <li>• a mechanism of agenda setting</li> </ul>	<i>Dimension 4</i> Seen in terms of implications for global higher education: <ul style="list-style-type: none"> <li>• openness – diversity</li> <li>• closeness – homogeneity</li> </ul>

**9.2.1 Ecological Implications: Power and Politics in University Governance**

Dimension 1 mainly corresponded to my first research question “what are the impacts of university rankings on Taiwan’s higher education?” Hence, this dimension is concerned with how university rankings have influenced stakeholders in the higher education sector of Taiwan at systemic, institutional and individual level respectively. In regard to systemic responses, we have witnessed that financial resources are concentrated on twelve universities through the launch of the “five-year-fifty-billion” program. In fact, the Taiwanese government clearly stated its goal of building a world-class university through promoting research excellence and internationalisation in the selected universities. It aimed that at least one Taiwanese university would join the world’s top 100 through the program. From the government perspective, this policy of building skyscrapers is an effective way of enhancing the prestige as well as the overall quality of the higher education system. Nevertheless, the policy has also resulted in a steep stratification and differentiation in Taiwan’s higher education system. As revealed by my fieldwork, the prevalence of a “ranking movement” in Taiwan has bred a performativity culture that has substantially intensified competition among HEIs. Many respondents believed that this is a “zero-sum-game” that causes

unhealthy competition and inequality in higher education. In fact, in the climate of competition, some respondents reported that their teaching duties have been significantly affected. This “academic drift” (Zhao, 2007) was considered as an unintended but harmful impact of the rankings.

Nevertheless, in light of Bourdieu’s work, it was also argued that the hierarchical structure of the higher education system is a determining factor affecting the degree of penetration of the normative power. Indeed, my third research question “how can the ranking phenomenon be theoretically framed?” formulates Dimension 3, which conceptualises university rankings as a form of normative power in higher education in light of Foucault’s conception of discipline. Based on this conceptualisation, the significance of the impacts of league tables on Taiwan’s higher education is interpreted as the extent of the normative power of rankings. Then, the findings from fieldwork revealed that faculty member’s attitudes toward university rankings largely depend on their positions and the positioning of their affiliations in the academic hierarchy. To be specific, young faculty members from prestigious universities were keener to embrace the competitive game imposed by rankings, while senior faculty members, especially those from non-prestigious universities, tended to show stronger resistance to the ranking movement. This analytical approach to university rankings substantially demonstrated the connection between ranking systems and power relations in higher education. It illustrated the ubiquitous but uneven capillary effect of the normative power of ranking in the stratified and differentiated higher education system.

### **9.2.2 Geographical Implications: Navigating the Global Higher Education Landscape**

Dimension 2 attempted to answer my second research question “how does the emergence of rankings influence Taiwan’s position in the global higher education landscape?” It intended to explain how global university rankings are understood as a mechanism holding Taiwan’s interests within the context of the emergence of an international higher education market and the prospect of regionalisation in East Asia. To illustrate Taiwan’s interests in university ranking systems, it was argued that league tables can be used to promote Taiwan’s interests in three ways. Firstly, it pointed out that university rankings have been taken by the Taiwanese government as a metric system to indicate the standard of universities, thereby reflecting their



distance from the status of a world-class university. In this sense, rankings are used as a governing tool to align the architecture of Taiwan's higher education system, thereby advancing its competitiveness. Secondly, university rankings are seen as a zoning technology promoting the growing trends toward regionalisation of higher education in East Asia. Thirdly, university rankings are considered as a mechanism of agenda setting promoting the discourses of Chineseness in global higher education. These two anticipations are developed based on the context of China's rise and the emergence of the idea of the Greater China in higher education (see Neubauer, 2010). They are involved in Taiwan's interests, as it is believed that the Taiwanese higher education sector can plausibly extend its influence in the process of regionalisation.

Dimension 4 then continued to explore how the ranking phenomenon at the international level can be theoretically framed. Therefore, this dimension looked into the power relations in global higher education. By using Nye's classification of power, rankings are conceptualised as a type of institution in the geo-politics of higher education. This conceptualisation illustrated the theoretical link between the notion of world-class university and ranking systems (cf. Sadlak & Liu, 2007). On this basis, it was argued that rankings have two distinctive sides generating opposite effects on the global landscape of higher education. The bright side of rankings stressed the motivations for internationalising higher education and pursuing research excellence imposed by rankings. It presumed that the concept of a world-class university did not favour any specific higher education paradigm, and hence viewed the ranking movement as an opportunity of promoting world-class excellence in higher education. In contrast, the dark side of rankings revealed that the Anglo-American paradigm has dominated the discourse on the notion of a world-class university. Thus, the prevalence of global university rankings means the predominance of the West in higher education. In light of Gramsci's work, global university rankings are interpreted as an institutionalised form of global hegemony or imperialism in higher education in the post-colonial era.

### **9.3 Theoretical Reflections**

My primary interest in this thesis is to look into the implication of rankings for Taiwan's higher education beyond practical issues with a rather academic concern. I

found an approach that is different from the approaches taken in the mainstream analysis concerning the methodology of rankings. The essential difference is the emphasis on the connection between technology and power. In fact, this has been an emerging direction in research on rankings. We found that some authors used the sociological approaches to deconstruct the normative power of rankings (for example Bastedo & Bowman, 2010, 2011; Bowman & Bastedo, 2009, 2011; Espeland & Sauder, 2007; Sauder & Espeland, 2009), while those from the field of studies in international education stressed the influence of international rankings on the global higher education landscape from a perspective of geo-politics of higher education (for example Deem et al., 2009; Deem et al., 2008; Ishikawa, 2009; Lo, 2011; Marginson, 2009a, 2009b; Stensaker & Kehm, 2009b). On this basis, I argued that we can see rankings as a concept for understanding their effects on higher education and developed a four-dimensional framework to examine the ranking phenomenon in Taiwan. In the following parts, I will return to the two clusters of dimensions outlined in the previous section to illustrate the theoretical value of this four-dimensional framework of rankings.

With regard to Dimensions 1 and 3, the distinction between structuralism and post-structuralism is a reference point to indicate the difference between the two dimensions in terms of their theoretical approaches. As structuralism views the truth as the articulation of system with event, structuralists claim that there are deep structures of languages which allow people to attach ultimate meanings of words (Rust, 1991). Therefore, for structuralists, understanding social phenomena is a matter of capturing the synchronic view of the system by rightly addressing the relevant events within a particular period (Sturrock, 2003). This structuralist claim justifies an archaeological mode of analysis. In Foucault's words, this archaeological approach is "the intrinsic description of the monument" that focuses on describing the "general system of the formation and the transformation of the statements" (cited in Dean, 1994, p. 16).

This structuralist account demonstrates the positivist approach taken by studies of Dimension 1 that views rankings as a variable formatting and transforming the rules and discourse under which higher education stakeholders and HEIs are implicated. In fact, as specified in Foucault's notion of discourse, discourses or discursive practices, which are understood to be fundamentally self-referential, are the powers that are crucial in determining human behaviours. Knowledge, which refers to

the power to define the terms of debate or the way a problem is to be understood, is therefore the key (Watson, 2000, pp. 70-71). Thus, in light of the structuralist approach, the emergence of ranking can be seen as the formation of a discursive practice and the related debates can be considered as the competition between approaches of transforming the statements. From this perspective, the intrinsic nature of power/knowledge projects a way of looking at league tables in which the ranking exercise is considered as a “top-down” design of power that influences people and institutions in higher education.

It is suggested that the conceptual dimension of rankings (Dimension 3) provides a post-structural approach to the understanding of university rankings. The point here is to take the post-structuralists’ query about the basic assumption in structuralism, i.e. the systematic interconnections within language formed by stable relationships between its units (Hughes & Sharrock, 2007). As Rust (1991) pointed out, post-structuralism emphasises “the contingency of meaning and the slipperiness of language” (p. 611). This assumption of variable relationships between units of language implies that language, power and knowledge rely on extrinsic factors to lead to the systematic completion. The philosophical implication of this account of post-structuralism is that the positivist approach which explores a definitive theoretical representation of reality is fundamentally flawed. For post-structuralists, this is an important theoretical standpoint against positivism. Furthermore, this demonstrates a different way of reading and presenting truth. From the Foucauldian perspective, this represents a shift from archaeology to genealogy (Ninnes & Burnett, 2003; Watson, 2000).

Foucault’s notion of disciplinary power is useful for explaining the distinction between structuralist and post-structuralist methods. He uses surveillance to explain that human behaviours can be controlled and regulated without using force. As he explains, automatic responses to stimuli are created and reproduced without awareness if there is sufficient repetition (Foucault, 1977). Based on this notion of disciplinary power, it can be thought of the cumulative effect of one group of items against another group (Prado, 1995, citing Wisdom, 1955). Prado (1995) calls this understanding of truth “power-constructed truth”. It views facts as a sort of experience produced by power in contrast with “discourse-relative truth” projecting the structuralist assumption in which there are no facts to be articulated but only interpretations. This experiential notion of truth provides another way of capturing

“the truth”. Instead of exploring a chain of demonstrative reasoning, experiential truth focuses on pattern and process in which things come together. In light of this, the purpose of studying university rankings is to illustrate how organisational culture and individual behaviours in universities are transformed by incorporating and weighing the effects of university rankings. Therefore, the investigation in Dimension 3 is to reconstruct the views and experiences of the stakeholders of higher education with special reference to their power-relations with university rankings.

As for Dimensions 2 and 4, while the geographical account of ranking and higher education transformation primarily aims to examine the relevance of dependency and world-systems theory (Hayhoe, 2000), this aspect of analyses is also closely linked to the debate between modernity and post-modernity. One of the major tensions between modernism and post-modernism lies in the perspectives on understanding the changes brought by globalisation. Indeed, the past three decades have witnessed fundamental changes with which nation-states have profoundly altered both their internal structures and their external strategies to thrive or just survive in a new, highly competitive world order (Mouzelis, 2008). From the post-modern perspective, these changes mean that the modern society was built on Eurocentric conceptions and features and has now been replaced by a post-modern one, in which “the belief systems and the collective certainties of early modernity have evaporated” (Mouzelis, 2008, p. 1). However, for some social theorists, “the post-modern does not simply replace the modern, but rather performs a continual rereading and critique of modern values and projects” (Malpas, 2005, p. 44). This argument considers that the post-modern is not distinct from modern. Instead, “there are strong continuities between the old and the new” and “the logic of modernity has not been interrupted or transcended, it has merely been accelerated” (Mouzelis, 2008, pp. 1-2). They therefore believed that the present-day world is in the late-modern period rather than the post-modern (Cowen, 1996; Malpas, 2005; Mouzelis, 2008).

The debate between modernity and post-modernity provides a reference point to illustrate the focus of discussion in Dimension 2. As examined in Chapter 2, there is a bright side and dark side of global university rankings. In light of both the modern and post-modern agendas, the bright side can be seen as a way of leading global higher education into a post-Eurocentric world where international development lies on the specification of difference (Cowen, 1996), and the dark side of ranking as a form of neo-colonialism and an instance of neo-imperialism is considered to be a force pulling

global higher education back into a Eurocentric framework in which development is guided by the principles of generalisation and of universal facts and values (Altbach & Kelly, 1984; Tikly, 2001, 2004).<sup>33</sup>

This theoretical approach has led this study to a methodological framework in which nations are the primary unit of analysis because global university rankings, in this aspect of analysis, are taken as the technology to preserve or break the features and forms of the Eurocentric conception and nations to a large extent still play a determining role in developing infrastructure and initiatives of higher education (Green, 2007). As pointed out by Cowen (1996), old structures can be assigned to perform in new ways, while new structures can also work in old ways. This is largely determined by nations. In this sense, the focus of the analysis in Dimension 2 is on the description of educational structure with special reference to the role of the state in the transition between modernity and post-modernity.

Dimension 4 then extends the post-modern analysis from a structural one to that of consciousness and identity. For some social theorists, the post-modern thought is inclusive of post-colonialism and other relevant concepts, like neo-imperialism (see Hughes & Sharrock, 2007; Ninnis & Burnett, 2003 for example). But, Welch (2003, 2007) argued that there are significant differences between postmodern discourse, and that of post-colonialism. As he has explained, the post-colonial discourse has a strong ethical stance that rejects the ignorance of colonial structures and ideologies in the measurement and analysis of social development. From his viewpoint, this ethical stance distinguishes post-colonialism “rather sharply from many of the more modish, contemporary forms of postmodern discourse, that often celebrate an undifferentiated culture of sign and symbol, a semiotic of free-floating signifiers” (Welch, 2003, p. 305).

This clarification of the distinction between post-modern and post-colonial discourses illustrates the connection between the study of the technological dimension of ranking and that of the conceptual dimension of ranking in the geographical aspect. While the former commences with a value-free assumption that nations, including those in peripheries, are free to react to externally-generated requirements (here,

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<sup>33</sup> This analytical approach in dealing with the bright and dark sides of university rankings is based on a dichotomy between modernity and post-modernity, in which modernisation largely projects Westernisation and post-modernity stands for a de-Eurocentric perspective. Yet, for Mouzelis (2008), modernity does not equal Westernisation, and therefore structural features initiated in Europe can be still relevant in the post-Eurocentric era.

global university rankings), the latter begins with an assumption in which peripheral nations are viewed as followers of core nations. This neo-colonial conception is important because it underlines that the new world order is premised on western hegemony. Furthermore, according to the idea of post-national geography, the political and cultural predominance of western societies is upheld in indirect forms featured by transnational components (Appadurai, 1996, 2003). This account of neo-colonialism not only implies a process of theoretical shift, in which “territorial terrain” is replaced by “discursive terrain” (Tikly, 2004), but also methodologically projects a “positional perspective” from which “the specification of the position of minorities within the modernity project that needed reordering to stress emancipation” (Cowen, 1996, p. 154). Cowen (1996) used the term “emancipatory project” to describe this methodological approach, in which the primary unit of analysis shifts from nations to the features of global flow and the formation of consciousness and identity (cf. Dale, 2006).

Nevertheless, it is realised that it is quite impossible to shake off nationalist and statist assumptions in conducting system-wide analysis (Dale, 2006). Indeed, national sovereignty over education is still effective in disguising the forms and locations of “power” over education in globalisation. In this regard, though discussion in Dimension 4 is primarily concerned with the specification of the forms and contents and styles of positional cultural identity, it views the positional cultural identity as one created by both local structures and global flows.

## **9.4 Methodological Reflections**

In this thesis, I used the methods of qualitative research to study my reflective awareness of the ranking phenomenon in the Taiwanese academic system. In this regard, the focus of this dissertation is on providing a reflective investigation on university rankings or tools of evaluation in general within the Taiwanese context rather than offering a detailed assessment of the impacts of rankings on Taiwan’s higher education sector.

The reflective stance of the qualitative approaches to understanding the ranking movement in this study is that the ranking phenomenon occurs in the field in which I was somewhat an agent (Packer, 2011; also see Bourdieu, 1988). Although I did not

work or study in the Taiwanese higher education system, I did not see that there was a distinctive gap between my primary social field and the Taiwanese one. This probably is because I am from Hong Kong, a Chinese society which shares many common social foundations with the Taiwanese society. More importantly, I viewed academic systems in East Asia as a collectivity of peripheries, in which the Taiwanese system is an instance. In this sense, I considered the ranking movement as a transnational phenomenon impacting on most academic systems in East Asia and directing these peripheral nations towards the standards of the centres. I sought to investigate how people, institutions and systems compete for better positions and acquire reputational status under the influence of university rankings.

The reflective nature of the methodological approach is important, as it rescues this observational work from “the pitfalls of mere description” (Silverman, 2011, p. 5). The reflective nature classifies this thesis as an examination of how ranking plays a role in changing the power relations in higher education at different levels of competition. This methodological approach is strong in terms of offering a theoretical understanding of the ranking phenomenon by revealing that the ranking phenomenon is attached to the academic game in which participants (including individuals, institutions and systems) in the field must struggle for position and prestige, despite the fact that they are not equal in terms of status and power (Altbach, 1987; Bourdieu, 1988). Based on this, the field data collected through interviewing are seen as a narrative account of some subjective experiences of the participants in the academic game (Miller & Glasser, 2011). From the positivistic perspective, the sampling methods used and the qualitative data collected in the fieldwork for this study may not fulfil the requirements of scientific objectivity. However, they are still useful and essential in terms of producing an authentic account of the ranking phenomenon, despite the fact that some of the interviewees’ responses were rather expected. Indeed, as Charmaz (1995) noted:

We start with the experiencing person and try to share his or her subjective view. Our task is objective in the sense that we try to describe it with depth and detail. In doing so, we try to present the person’s view fairly and to portray it as consistent with his or her meanings (p. 54).

From this perspective, my task in the data analysis is to combine these authentic

accounts of subjective experience with the concepts related as well as the contexts and situations in which the experience emerged in order to provide theoretical understandings and contextual specifications of the ranking phenomenon (Miller & Glasser, 2011, p. 135).

In sum, this dissertation illuminates the ranking phenomenon within the Taiwanese context with the goal of providing a reflective stance on competition in academic circles.

## **9.5 Recommendations for Further Research**

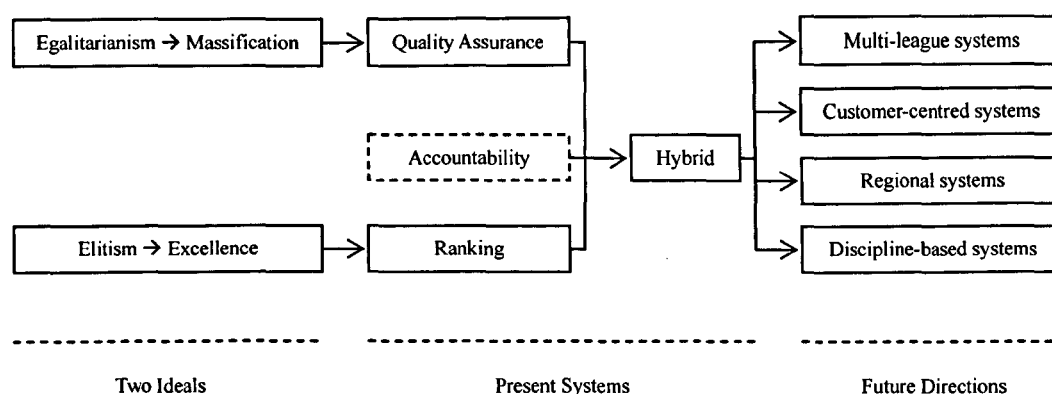
### **9.5.1 The Future of University Rankings**

After reviewing the many positive and negative effects of rankings on higher education, commentators started to think about the future of university rankings. Usher for example advocated a new way of comparing institutions, which he called “University Ranking 2.0” (Usher, 2008, 2009). In his view, we should be aware of the positive effects of enhancing transparency brought by rankings. This is particularly important for students, as they need effective and efficient information tools to ensure that they gain an educational experience that meets their primary interests in a market-driven higher education system. However, we also need to be sensitive to the tendency of homogenisation imposed by rankings, which is seen as a negative effect on higher education. To find a balance, we need a way, which on the one hand allows customers to select indicators and apply different weightings based on their preferences, and on the other hand, allows higher education systems and HEIs to retain their uniqueness. According to Shin and Toutkoushian (2011), this balance can be made through developing rankings towards four directions: multidimensional, customer-centred, regional and discipline-based (Figure 9.1).

This prospect is based on a principle that “the real value of ‘ranking’ is not ranking, but matching” (van der Wende & Westerheijden, 2009, p. 78). Therefore, there is a goal of toning down the competitive elements and underlining the collaborative ones in ranking exercises in such a prospect. The “U-Multirank” project funded by the European Commission was developed based on this mission, therefore attempting to test the feasibility of a multi-dimensional global university ranking (CHERPA-Network, 2010a, 2010b).



**Figure 9.1: Future directions for university rankings**



*Source:* Shin and Toutkoushian (2011, p. 14).

Obviously, continuing to observe and examine the development of rankings (i.e. whether and how there is a trend toward multipolarity in various levels and aspects) should be an important direction for future research in this arena. Along the line of investigation set in this thesis, the hope of diversity and fear of homogeneity would be one of the focuses of investigation. This scenario essentially involves the politics of higher education, in which various stakeholders will continue to struggle with each other for defining the primary mission of higher education and productivity of faculty staff and HEIs (Shin & Toutkoushian, 2011). Given that “We have experienced many rapid changes in higher education over the last few decades, and many changes were not predicted beforehand” (Teichler, 2011a, p. 264), continuing research is necessary.

### 9.5.2 Broad Policy Implications

Apart from the possible futures of rankings, the geographical dimensions of rankings remind us that we are witnessing a transformation of the global higher education landscape. Indeed, we have been experiencing the impacts of globalisation on higher education in the last few decades (Spring, 2008). During the process, we have witnessed that the notions of research excellence, quality assurance, internationalisation and world-class university entered the discourse in both academic and non-academic circles, and gradually dominated our understanding of quality in higher education. For me, the prevalence of global league systems represents a process of institutionalisation of this global trend and the many related transformations. In this sense, the criticisms and resistance to global rankings,

especially those viewing league tables as a form of post-colonialism or imperialism, are a kind of reflection on pressures for development. As examined in Chapter 8, the foundation for this understanding of rankings is a belief in a predominant western discourse on the concept of “development” (Tikly, 2001, 2004).

This conceptual context points to a direction for future research in which researchers need to explore the possible alternative models of higher education. As a researcher from China and East Asia, I am particularly interested in raising hope for regionalisation of higher education in East Asia (Neubauer & Hawkins, 2012). From this perspective, the possibility and feasibility of developing East Asia or Greater China as a “region” in global higher education (Mok, 2010a; Neubauer, 2010, 2011), the role and function of rankings in this process (Knight, 2011; Lo, 2011), as well as the implications of such a process for higher education policy, university governance and behaviours of higher education stakeholders are important topics for future research on international higher education.

## Appendix A

### **Berlin Principles on Ranking of Higher Education Institutions**

Rankings and league tables of higher education institutions (HEIs) and programs are a global phenomenon. They serve many purposes: they respond to demands from consumers for easily interpretable information on the standing of higher education institutions; they stimulate competition among them; they provide some of the rationale for allocation of funds; and they help differentiate among different types of institutions and different programs and disciplines. In addition, when correctly understood and interpreted, they contribute to the definition of “quality” of higher education institutions within a particular country, complementing the rigorous work conducted in the context of quality assessment and review performed by public and independent accrediting agencies. This is why rankings of HEIs have become part of the framework of national accountability and quality assurance processes, and why more nations are likely to see the development of rankings in the future. Given this trend, it is important that those producing rankings and league tables hold themselves accountable for quality in their own data collection, methodology, and dissemination.

In view of the above, the International Ranking Expert Group (IREG) was founded in 2004 by the UNESCO European Centre for Higher Education (UNESCO-CEPES) in Bucharest and the Institute for Higher Education Policy in Washington, DC. It is upon this initiative that IREG’s second meeting (Berlin, 18 to 20 May, 2006) has been convened to consider a set of principles of quality and good practice in HEI rankings—the **Berlin Principles on Ranking of Higher Education Institutions**.

It is expected that this initiative has set a framework for the elaboration and dissemination of rankings—whether they are national, regional, or global in scope—that ultimately will lead to a system of continuous improvement and refinement of the methodologies used to conduct these rankings. Given the heterogeneity of methodologies of rankings, these principles for good ranking practice will be useful for the improvement and evaluation of ranking.

## **Rankings and league tables should:**

### **A) Purposes and Goals of Rankings**

1. Be one of a number of diverse approaches to the assessment of higher education inputs, processes, and outputs. Rankings can provide comparative information and improved understanding of higher education, but should not be the main method for assessing what higher education is and does. Rankings provide a market-based perspective that can complement the work of government, accrediting authorities, and independent review agencies
2. *Be clear about their purpose and their target groups.* Rankings have to be designed with due regard to their purpose. Indicators designed to meet a particular objective or to inform one target group may not be adequate for different purposes or target groups.
3. *Recognize the diversity of institutions and take the different missions and goals of institutions into account.* Quality measures for research-oriented institutions, for example, are quite different from those that are appropriate for institutions that provide broad access to underserved communities. Institutions that are being ranked and the experts that inform the ranking process should be consulted often.
4. *Provide clarity about the range of information sources for rankings and the messages each source generates.* The relevance of ranking results depends on the audiences receiving the information and the sources of that information (such as databases, students, professors, employers). Good practice would be to combine the different perspectives provided by those sources in order to get a more complete view of each higher education institution included in the ranking.
5. *Specify the linguistic, cultural, economic, and historical contexts of the educational systems being ranked.* International rankings in particular should be aware of possible biases and be precise about their objective. Not all nations or systems share the same values and beliefs about what constitutes “quality” in tertiary institutions, and ranking systems should not be devised to force such comparisons.

## B) Design and Weighting of Indicators

6. *Be transparent regarding the methodology used for creating the rankings.* The choice of methods used to prepare rankings should be clear and unambiguous. This transparency should include the calculation of indicators as well as the origin of data.
7. *Choose indicators according to their relevance and validity.* The choice of data should be grounded in recognition of the ability of each measure to represent quality and academic and institutional strengths, and not availability of data. Be clear about why measures were included and what they are meant to represent.
8. *Measure outcomes in preference to inputs whenever possible.* Data on inputs are relevant as they reflect the general condition of a given establishment and are more frequently available. Measures of outcomes provide a more accurate assessment of the standing and/or quality of a given institution or program, and compilers of rankings should ensure that an appropriate balance is achieved.
9. *Make the weights assigned to different indicators (if used) prominent and limit changes to them.* Changes in weights make it difficult for consumers to discern whether an institution's or program's status changed in the rankings due to an inherent difference or due to a methodological change.

## C) Collection and Processing of Data

10. *Pay due attention to ethical standards and the good practice recommendations articulated in these Principles.* In order to assure the credibility of each ranking, those responsible for collecting and using data and undertaking on-site visits should be as objective and impartial as possible.
11. *Use audited and verifiable data whenever possible.* Such data have several advantages, including the fact that they have been accepted by institutions and that they are comparable and compatible across institutions.
12. *Include data that are collected with proper procedures for scientific data collection.* Data collected from an unrepresentative or skewed subset of students, faculty, or other parties may not accurately represent an institution or program and should be excluded.

13. *Apply measures of quality assurance to ranking processes themselves.*  
These processes should take note of the expertise that is being applied to evaluate institutions and use this knowledge to evaluate the ranking itself. Rankings should be learning systems continuously utilizing this expertise to develop methodology.
14. *Apply organizational measures that enhance the credibility of rankings.*  
These measures could include advisory or even supervisory bodies, preferably with some international participation.

D) Presentation of Ranking Results

15. *Provide consumers with a clear understanding of all of the factors used to develop a ranking, and offer them a choice in how rankings are displayed.*  
This way, the users of rankings would have a better understanding of the indicators that are used to rank institutions or programs. In addition, they should have some opportunity to make their own decisions about how these indicators should be weighted.
16. *Be compiled in a way that eliminates or reduces errors in original data, and be organized and published in a way that errors and faults can be corrected.*  
Institutions and the public should be informed about errors that have occurred.

Berlin, 20 May 2006

## **Appendix B**

### **Interview Protocol**

This interview is about the implications of global university rankings for Taiwan's universities and for your own university. The researcher wants to know how global university rankings affect academic life in Taiwan. In this interview, the questions focus on your understanding of university rankings, issues related to university rankings and ways to respond to the emergence of university rankings. The researcher also looks at the concepts of accountability, transparency, competition, commercialisation and world-class university in relation to the emergence of global university rankings.

#### **Background information**

1. Do you currently occupy management position?
2. When was your first academic appointment?
3. How long have you been employed at your university?
4. Have you worked in other university in Taiwan?
5. Have you worked in a university overseas?

#### **Your understanding of university rankings**

6. University rankings have been highlighted in the media and by some academics. Could you name any ranking system that you have heard?
7. How important are university rankings?
8. In regard to the impact of rankings on higher education, what is the extent of change over the last five years?
9. Which of the following indicators are usually used to compare universities in the ranking system(s) you know?

- The research performance of institutions
- The teaching performance of institutions
- The performance of students and alumni
- The performance of academic staff
- The reputation of institutions
- The size of institutions
- The internationalisation level of institutions
- The finance of institutions

10. Which indicators do you think most important?

11. Would you say that the ranking system(s) you know is a fair mechanism to reflect the performance of your own university? If not, why not?

12. What about universities in Taiwan in general?

### **Issues related to university rankings**

13. “Ranking provides useful information to the stakeholders (e.g. students and funders)”. Do you agree?

14. Do you think that rankings are accessible to all stakeholders?

15. How do they use the information?

16. Do different categories of stakeholders use the information in different ways?

17. Do you think that the stakeholders can interpret the data correctly? Is this a case of cognitive dissonance?

18. Do you think ranking has influenced any of these practices:

- Accountability (has it increased?)
- Transparency (has it increased?)
- Competition (has it increased?)
- Commercialisation (has it increased?)

19. There are criticisms that many ranking exercises are far from systemic and scientific. Do you agree with these criticisms?

20. Who would benefit from what sorts of ranking system?

21. University rankings are related to the call for building world-class university in East Asia. What does world-class university mean to you?

22. Do you think that the world’s top 100 places mean world-class excellence?



23. What is the benefit of achieving world-class excellence?
24. There is an argument that criteria used in leading university rankings show favour to universities from English speaking countries (e.g. the US and the UK). Do you agree with this argument?
25. Is there any impact of these criteria on your daily work (e.g. teaching and research) and on the development of your own university (and/or Taiwan's universities)?
26. Do you think teaching has been overshadowed by research? Does this phenomenon affect your university? How does it affect your university?

### **Responses to university rankings**

27. How concerned are you or your university with the performance of your university in the league table(s) you named?
28. In what ways have you university or Taiwan's universities tried to improve their performance in the ranking(s)? Any success?
29. Role differentiation and funding concentration are common practices adopted by governments to build research-intensive universities; to improve the performance of selected universities in global rankings. Do you think the Taiwan government adopts such a policy? How does this policy affect your university?
30. If so, do you see it as facilitative the enhancement of the overall quality of Taiwan's higher education?
31. Do you have any other comments about university rankings and their impacts on your university or on Taiwan's universities in general?

## Appendix C

### Interviewee Details

Interviewee	Affiliation	Position
A1	University A	Head of Department and Professor
A2	University A	Assistant Professor
A3	University A	Dean of Faculty and Professor
A4	University A	Associate Dean of Faculty and Professor
A5	University A	Director of Research Institute and Professor
B1	University B	Director of Research Institute and Professor
B2	University B	Dean of Faculty and Professor
B3	University B	Assistant Professor
B4	University B	Associate Professor
B5	University B	Associate Professor
C1	University C	Assistant Professor
C2	University C	Dean of Faculty and Professor
C3	University C	Associate Professor
C4	University C	Assistant Professor
D1	University D	Head of Department and Professor
D2	University D	Director of Research Institute and Associate Professor
D3	University D	Dean of Faculty and Professor
D4	University D	Director of Research Institute and Professor
E1	University E	Dean of Faculty and Professor
E2	University E	Associate Professor
E3	University E	Associate Professor
E4	University E	Associate Professor
E5	University E	Head of Department and Professor
H1	HEEACT	Research Fellow

## References

- Adams, J., & Gurney, K. (2010). *Funding Selectivity, Concentration and Excellence - How Good is the UK's Research?* Oxford: Higher Education Policy Institute.
- Adnett, N., & Davies, P. (2002). Education as a positional good: Implications for market-based reforms of state schooling. *British Journal of Educational Studies*, 5(2), 189-205.
- Altbach, P. G. (1987). *Higher Education in the Third World: Themes and Variation*. New Delhi: Sangam Books.
- Altbach, P. G. (1998). *Comparative Higher Education: Knowledge, the University, and Development*. Hong Kong: Comparative Education Research Centre, University of Hong Kong.
- Altbach, P. G. (2004a). The costs and benefits of world class universities. *Academe*, 90. Retrieved 04 June, 2009, from [www.aaup.org/AAUP/pubsres/academe/2004/JF/Feat/altb.htm](http://www.aaup.org/AAUP/pubsres/academe/2004/JF/Feat/altb.htm)
- Altbach, P. G. (2004b). Globalization and the university: myths and realities in an unequal world. *Tertiary Education and Management*, 10(1), 3-25.
- Altbach, P. G. (2006). The dilemmas of ranking. *International Higher Education*, 42(Winter), 2-3.
- Altbach, P. G. (2007). Empires of knowledge and development. In P. G. Altbach & J. Balán (Eds.), *World Class Worldwide: Transforming Research Universities in Asia and Latin America* (pp. 1-30). Baltimore: The Johns Hopkins University Press.
- Altbach, P. G., & Balán, J. (Eds.). (2007). *World Class Worldwide: Transforming Research Universities in Asia and Latin America*. Baltimore: The Johns Hopkins University Press.
- Altbach, P. G., & Kelly, G. P. (1984). *Education and the Colonial Experience* (2nd ed.). New Brunswick, NJ: Transaction Books.
- Altbach, P. G., & Knight, J. (2007). The internationalization of higher education: motivations and realities. *Journal of Studies in International Education*, 11(3/4), 290-305.
- Alvesson, M., & Kärreman, D. (2011). *Qualitative Research and Theory Development: Mystery as Method*. London: Sage.
- Anonymous. (2010, 4 May). After fierce debate, Taiwan will enroll students from mainland China. *The Chronicle of Higher Education*.
- Appadurai, A. (1996). *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis, MN: University of Minnesota Press.
- Appadurai, A. (2003). Sovereignty without territoriality: notes for a postnational geography. In S. M. L. Low & D. Lawrence-Zúñiga (Eds.), *The Anthropology of Space and Place: Locating Culture* (pp. 337-347). Malden, MA: Blackwell Pub.
- Apple, M. W. (2000). Between neoliberalism and neoconservatism: education and conservatism in a global context. In N. C. Burbules & C. A. Torres (Eds.), *Globalization and Education: Critical Perspectives* (pp. 57-78). New York: Routledge.
- Arimoto, A. (2011). Reaction to academic ranking: knowledge production, faculty productivity from an international perspective. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 229-258). Dordrecht: Springer Science and Business Media.
- Arno, R. F. (1980). Comparative education and world-systems analysis. *Comparative Education Review*, 24(1), 48-62.
- Ashby, E. (1966). *Universities: British, Indian, African: A Study in the Ecology of Higher*

- Education*. London: Weidenfeld and Nicolson.
- Babbie, E. (2010). *The Practice of Social Research* (12th ed.). Belmont, CA: Wadsworth.
- Badat, S. (2010). The world-class university and the global South. In *World Social Science Report 2010: Knowledge Divides* (pp. 245-247). Paris: UNESCO.
- Bailey, K. D. (1994). *Methods of Social Research* (4th ed.). New York: Free Press.
- Ball, S. J. (2007). *Education plc: Understanding Private Sector Participation in Public Sector Education*. London: Routledge.
- Ball, S. J. (2008). New philanthropy, new networks and new governance in education. *Political Studies*, 56(4), 747-765.
- Ball, S. J. (2009a). Academies in context: politics, business and philanthropy and heterarchical governance. *Management in Education*, 23(3), 100-103.
- Ball, S. J. (2009b). *Global education, enterprise and hybrid organisations*. Paper presented at the 2009 Asian-Pacific Forum on Sociology of Education: Social Change and Education Reform.
- Bastedo, M. N., & Bowman, N. A. (2010). U.S. News & World Report college rankings: modeling institutional effects on organizational reputation. *American Journal of Education*, 116(2), 163-184.
- Bastedo, M. N., & Bowman, N. A. (2011). College rankings as an interorganizational dependency: establishing the foundation for strategic and institutional accounts. *Research in Higher Education*, 52(1), 3-23.
- Becker, B. J., & Wu, M.-J. (2009). Generalizability and research synthesis. In K. Ercikan & W.-M. R. Roth (Eds.), *Generalizing from Educational Research: Beyond Qualitative and Quantitative Polarization* (pp. 101-116). New York: Routledge.
- Besussi, E. (2006). *Policy Networks: Conceptual Developments and Their European Applications*. London: Centre for Advanced Spatial Analysis, University College London.
- Bok, D. (2003). *Universities in the Marketplace: The Commercialization of Higher Education*. Princeton, NJ: Princeton University Press.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste* (R. Nice, Trans.). London: Routledge & Kegan Paul.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education* (pp. 241-258). New York: Greenwood Press.
- Bourdieu, P. (1988). *Homo Academicus*. Cambridge: Polity Press in association with Basil Blackwell.
- Bourdieu, P. (1993). *Sociology in Question* (R. Nice, Trans.). London: Sage Publications.
- Bowman, N. A., & Bastedo, M. N. (2009). Getting on the Front Page: Organizational Reputation, Status Signals, and the Impact of U.S. News and World Report on Student Decisions. *Research in Higher Education*, 50(5), 415-436.
- Bowman, N. A., & Bastedo, M. N. (2011). Anchoring effects in world university rankings: exploring biases in reputation scores. *Higher Education*, 61(4), 431-444.
- Brewer, D., Gates, S., & Goldman, C. (2002). In *Pursuit of Prestige: Strategy and Competition in U.S. Higher Education*. New Brunswick, NJ: Transaction Publishers.
- Brooks, R. L. (2005). Measuring university quality. *The Review of Higher Education*, 29(1), 1-21.
- Brown, D. J. (1994). Decentralization in educational governance and management. In T. Husén & T. N. Postlethwaite (Eds.), *The International Encyclopedia of Education* (2nd ed., pp. 1407-1412). Oxford: Pergamon Press.
- Burawoy, M. (1979). *Manufacturing Consent: Changes in the Labor Process Under Monopoly Capitalism*. Chicago: University of Chicago Press.
- Burbules, N. C., & Torres, C. A. (Eds.). (2000). *Globalization and Education: Critical Perspectives*. New York: Routledge.
- Burke, J. C. (2005). The many faces of accountability. In J. C. Burke (Ed.), *Achieving Accountability in Higher Education: Balancing Public, Academic, and Market Demands* (pp. 1-24). San Francisco: Jossey-Bass.
- Burton-Jones, A. (1999). *Knowledge Capitalism: Business, Work and Learning in the New*

- Economy*. Oxford: Oxford University Press.
- Butler, D. (2010). University rankings smarten up. *Nature*, 464(4), 16-17.
- Calhoun, C., Gerteis, J., Moody, J., Pfaff, S., & Virk, I. (Eds.). (2007). *Contemporary Sociological Theory* (2nd ed.). Malden, MA: Blackwell Pub.
- Cantwell, B., & Maldonado-Maldonado, A. (2009). Four stories: confronting contemporary ideas about globalisation and internationalisation in higher education. *Globalisation, Societies and Education*, 7(3), 289-306.
- Carnoy, M. (1999). *Globalization and Educational Reform: What Planners Need to Know*. Paris: UNESCO, International Institute for Educational Planning.
- Castells, M. (1994). The university system: engine of development in the new world economy. In J. Salmi & A. M. Verspoor (Eds.), *Revitalizing Higher Education* (pp. 14-40). Oxford: Pergamon.
- Castells, M. (2000a). *End of Millennium* (2nd ed.). Oxford: Blackwell Publishers.
- Castells, M. (2000b). *The Rise of the Network Society* (2nd ed.). Oxford: Blackwell Publishers.
- Council for Economic Planning and Development [CEPD], Taiwan. (2000). *Plan for National Development in the Next Century*. Taipei: Council for Economic Planning and Development.
- Council for Economic Planning and Development [CEPD], Taiwan. (2005). *Second-Term Plan for National Development in the New Century*. Taipei: Council for Economic Planning and Development.
- Council for Economic Planning and Development [CEPD], Taiwan. (2009). *Third-Term Plan for National Development in the New Century*. Taipei: Council for Economic Planning and Development.
- Cerny, P. G. (1990). *The Changing Architecture of Politics: Structure, Agency, and the Future of the State*. London: Sage.
- Cerny, P. G., Menz, G., & Soederberg, S. (2005). Different roads to globalization: neoliberalism, the competition state, and politics in a more open world. In S. Soederberg, G. Menz & P. G. Cerny (Eds.), *Internalizing Globalization: the Rise of Neoliberalism and the Decline of National Varieties of Capitalism* (pp. 1-32). Basingstoke: Palgrave Macmillan.
- Chan, D., & Lo, W. (2008). University Restructuring in East Asia: trends, challenges and prospects. *Policy Futures in Education*, 6(5), 641-652.
- Charmaz, K. (1995). Between positivism and postmodernism: implications for methods. *Studies in Symbolic Interaction*, 17, 43-72.
- Centre for Higher Education Development [CHE], UNESCO-European Centre for Higher Education [CEPES], Institute for Higher Education Policy [IHEP]. (2006). Berlin Principles on Ranking of Higher Education Institutions. Retrieved 10 October, 2009, from [www.che.de/downloads/Berlin\\_Principles\\_IREG\\_534.pdf](http://www.che.de/downloads/Berlin_Principles_IREG_534.pdf)
- Chen, D., & Lo, W. (2007). Critical reflections of the approaches to quality in Taiwan's higher education. *The Journal of Comparative Asian Development*, 6(1), 165-186.
- Chen, D. I. R. (2008). Managerialism and its impact on female academics in Taiwan. *Journal of Asian Public Policy*, 1(3), 328-345.
- Chen, T. J. (2004). The challenges of the knowledge-based Economy. In T. J. Chen & J. S. Lee (Eds.), *The New Knowledge Economy of Taiwan* (pp. 1-18). Cheltenham: Edward Elgar.
- Cheng, C. Y. (2006). Education for morality in global and cosmic contexts: the Confucian model. *Journal of Chinese Philosophy*, 33(4), 557-570.
- Consortium for Higher Education and Research Performance Assessment [CHERPA]-Network. (2010a). U-Multirank: Interim Progress Report Design Phase of the Project. Retrieved 1 March, 2011, from [http://www.u-multirank.eu/UMR\\_IR\\_0110.pdf](http://www.u-multirank.eu/UMR_IR_0110.pdf)
- Consortium for Higher Education and Research Performance Assessment [CHERPA]-Network. (2010b). U-Multirank: Project "Design and Testing the Feasibility of a Multi-dimensional Global University Ranking". Retrieved 1 March,

- 2011, from <http://www.u-multirank.eu/project/U-Multirank%20Interim%20Report%202.pdf>
- Chou, C. P. (2008). The impact of neo-liberalism on Taiwanese higher education. In D. P. Baker & A. W. Wiseman (Eds.), *The Worldwide Transformation of Higher Education* (pp. 297-312). Bingley: JAI.
- Chu, Y. H. (2004). Taiwan's national identity politics and the prospect of cross-strait relations. *Asian Survey*, 44(4), 484-512.
- Chu, Y. H. (2007). Re-engineering the developmental state in an age of globalization: Taiwan's quest for high-tech industries. In R. Ash & J. M. Greene (Eds.), *Taiwan in the 21st Century: Aspects and Limitations of a Development Model* (pp. 154-176). London: Routledge.
- Chung, C., Tsai, P., & Wang, S. Y. (2004). US semiconductor patents granted to Taiwan, South Korea and Japan. In T. J. Chen & J. S. Lee (Eds.), *The New Knowledge Economy of Taiwan* (pp. 188-227). Cheltenham: Edward Elgar.
- Central Intelligence Agency [CIA], the USA. (2011). *The World Factbook*. Retrieved 5 July, 2011, from <https://www.cia.gov/library/publications/the-world-factbook/index.html>
- Clark, B. R. (2002). *Entrepreneurial University*. Hong Kong: Comparative Education Policy Research Unit, Department of Public and Social Administration, City University of Hong Kong.
- Coates, H. (2007). Universities on the catwalk: models for performance ranking in Australia. *Higher Education Management and Policy*, 19(2), 63-80.
- Coffey, A., & Atkinson, P. (1996). *Making Sense of Qualitative Data: Complimentary Research Strategies*. Thousand Oaks: Sage.
- Control Yuan, Taiwan. (2010). Investigation on the Program for Aiming for Top University. Retrieved 31 July, 2010, from [www.cy.gov.tw/db2.asp?edoc\\_no=1&intyear=&page=9](http://www.cy.gov.tw/db2.asp?edoc_no=1&intyear=&page=9)
- Cowen, R. (1996). Last past the post: comparative education, modernity and perhaps post-modernity. *Comparative Education*, 32(2), 151-170.
- Crossley, M., & Tikly, L. (2004). Postcolonial perspectives and comparative and international research in education: a critical introduction. *Comparative Education*, 40(2), 147-156.
- Cummings, W. K. (2006). Globalization and higher education/research: reflection on international trends and Taiwan experience. *Chung Cheng Educational Studies*, 5(6), 1-43.
- Currie, J., DeAngelis, R., de Boer, H., Huisman, J., & Lacotte, C. (2002). *Globalizing Practices and University Responses: European and Anglo-American Differences*. Westport: Praeger.
- Currie, J., & Newson, J. (Eds.). (1998). *Universities and Globalization: Critical Perspectives*. Thousand Oaks, CA: Sage Publications.
- Currie, J., Petersen, C. J., & Mok, K. H. (2006). *Academic Freedom in Hong Kong*. Lanham, MD: Lexington Books.
- Currie, J., & Vidovich, L. (1998). Micro-economic reform through managerialism in American and Australian universities. In J. Currie & J. Newson (Eds.), *Universities and Globalization: Critical Perspectives*. Thousand Oaks, CA: Sage Publications.
- Da, H. F. V. (2007). World universities rankings: generic and intangible features of world-class universities. In J. Sadlak & N. C. Liu (Eds.), *The World-class University and Ranking: Aiming Beyond Status* (pp. 55-60). Bucharest: UNESCO-CEPES.
- Dale, R. (2006). From comparison to translation: extending the research imagination? *Globalisation, Societies and Education*, 4(2), 179-192.
- Dale, R. (2008). Changing meanings of "the Europe of knowledge" and "modernizing the university," from Bologna to the "new Lisbon". *European Educational Research Journal*, 39(4), 27-42.
- Dale, R. (2009a). Contexts, constraints and resources in the development of European education space and European education policy. In S. Robertson & R. Dale (Eds.), *Globalisation and Europeanisation in Education* (pp. 23-43). Oxford: Symposium Books.
- Dale, R. (2009b). Studying globalisation and Europeanisation in education: Lisbon, the open

- method of coordination and beyond. In S. Robertson & R. Dale (Eds.), *Globalisation and Europeanisation in Education* (pp. 121-140). Oxford: Symposium Books.
- Dean, M. (1994). *Critical and Effective Histories: Foucault's Methods and Historical Sociology*. London: Routledge.
- Deem, R., Hillyard, S., & Reed, M. (2007). *Knowledge, Higher education, and the New Managerialism: The Changing Management of UK Universities*. Oxford: Oxford University Press.
- Deem, R., Lucas, L., & Mok, K. H. (2009). The 'world-class' university in Europe and East Asia: dynamics and consequences of global higher education reform. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 117-134). Rotterdam: Sense Publishers.
- Deem, R., Mok, K. H., & Lucas, L. (2008). Transforming higher education in whose image? exploring the concept of the 'world-class' university in Europe and Asia. *Higher Education Policy*, 21(3), 83-97.
- Dei, G. J. S. (2006). Introduction: mapping the terrain - towards a new politics of resistance. In G. J. S. Dei & A. Kempf (Eds.), *Anti-Colonialism and Education: The Politics of Resistance* (pp. 1-23). Rotterdam: Sense Publishers.
- Delanty, G. (2002). The governance of universities: what is the role of the university in the knowledge society. *Canadian Journal of Sociology*, 27(2), 185-198.
- deLisle, J. (2010). Soft power in a hard place: China, Taiwan, cross-strait relations and U.S. policy. *Orbis*, 54(4), 493-524.
- Denman, B. (2002). Globalisation and its impact on international university cooperation. *Globalization*, 2. Retrieved 30 December, 2008, from [http://globalization.icaap.org/content/v2.1/04\\_denman.html](http://globalization.icaap.org/content/v2.1/04_denman.html)
- Denscombe, M. (2007). *The Good Research Guide for Small-scale Social Research Projects* (3rd ed.). Maidenhead: McGraw/Open University Press.
- Department of Higher Education, Taiwan. (2008). Explanation on the Approval of the Phase Two of the Program for Aiming for Top University. Retrieved 31 July, 2010, from [http://www.edu.tw/high/itemize.aspx?itemize\\_sn=3520&pages=0&site\\_content\\_sn=1234&classify\\_sn=228](http://www.edu.tw/high/itemize.aspx?itemize_sn=3520&pages=0&site_content_sn=1234&classify_sn=228)
- Directorate General of Budget, Accounting and Statistics [DGBAS], Taiwan. (2011). Key Economic and Social Indicators. Retrieved 5 July, 2011, from <http://eng.dgbas.gov.tw>
- Dill, D. D. (1995). Through deming's eyes: a cross-national analysis of quality assurance policies in higher education. *Quality in Higher Education*, 1(2), 95-110.
- Dill, D. D. (1999). Academic accountability and university adaptation: the architecture of an academic learning organization. *Higher Education*, 38(2), 127-154.
- Dill, D. D. (2009). Convergence and diversity: the role and influence of university rankings. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 97-116). Rotterdam: Sense Publishers.
- Dill, D. D., & Soo, M. (2005). Academic quality, league tables, and public policy: a cross-national analysis of university ranking systems. *Higher Education*, 49(4), 495-533.
- Dolby, N., & Rahman, A. (2008). Research in international education. *Review of Educational Research*, 78(3), 676-726.
- Eccles, C. (2002). The use of university rankings in the United Kingdom. *Higher Education in Europe*, 27(4), 423-432.
- Education Reform Council of Executive Yuan, Taiwan. (1996). *The Summary Report for Education Reform*. Taipei: Executive Yuan.
- Eisenhart, M. (2009). Generalization from qualitative inquiry. In K. Ercikan & W.-M. R. Roth (Eds.), *Generalizing from Educational Research: Beyond Qualitative and Quantitative Polarization* (pp. 51-66). New York: Routledge.
- Elkus, R. J. (2008). *Winner Take All: How Competitiveness Shapes the Fate of Nations*. New York: Basic Books.
- Elsbach, K. D., & Kramer, R. M. (1996). Members' responses to organizational identity threats: encountering and countering the Business Week rankings. *Administrative Science Quarterly*, 42(2), 442-476.

- Endress, M. (2005). Introduction: Alfred Schutz and contemporary social theory and social research. In M. Endress, G. Psathas & H. Nasu (Eds.), *Explorations of the Life-world: Continuing Dialogues with Alfred Schutz* (pp. 1-15). Dordrecht: Springer.
- Engell, J., & Dangerfield, A. (1998). The market-model university: humanities in the age of money. *Harvard Magazine*, May- June, 48-55.
- Ercikan, K., & Roth, W.-M. R. (Eds.). (2009). *Generalizing from Educational Research: Beyond Qualitative and Quantitative Polarization*. New York: Routledge.
- Espeland, W. N., & Sauder, M. (2007). Rankings and reactivity: how public measures recreate social worlds. *American Journal of Sociology*, 113(1), 1-40.
- Ewell, P. T. (2008). *U.S. Accreditation and the Future of Quality Assurance: A Tenth Anniversary Report from the Council for Higher Education Accreditation*. Washington, DC: Council for Higher Education Accreditation.
- Federkeil, G. (2002). Some aspects of ranking methodology - the CHE-ranking of German universities. *Higher Education in Europe*, 27(4), 389-397.
- Federkeil, G. (2009). Reputation indicators in rankings of higher education institutions. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 19-33). Rotterdam: Sense Publishers.
- Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison*. New York, NY: Vintage Books.
- Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977* (C. Gordon, Trans.). New York: Pantheon Books.
- Frank, R. H. (2001). Higher education: the ultimate winner-take-all market? In M. E. Devlin & J. W. Meyerson (Eds.), *Forum Futures: Exploring the Future of Higher Education* (pp. 3-12). San Francisco: Jossey-Bass.
- Frank, R. H. (2004). Are arms races in higher education a problem? In *Forum Futures 2004* (pp. 49-52). Cambridge, MA: Educause.
- Frank, R. H., & Cook, P. J. (1995). *The Winner-Take-All Society: How More and More Americans Compete for Ever Fewer and Bigger Prizes, Encouraging Economic Waste, Income Inequality, and Impoverished Cultural Life*. New York: Martin Kessler Books.
- Galama, T., & Hosek, J. (2008). *U.S. Competitiveness in Science and Technology* Santa Monica, CA: RAND Corporation.
- Gallagher, M. (2011). The role of elite universities in national higher education and research system, and the challenges of prosecuting the case for concentrating public investment in their development in Australia. In N. C. Liu, Q. Wang & Y. Cheng (Eds.), *Paths to A World-class University: Lessons from Practices and Experiences* (pp. 29-66). Rotterdam: Sense Publishers.
- Geiger, R. L. (2004). Market coordination of higher education: the United States. In P. Teixeira, B. B. Jongbloed, D. D. Dill & A. Amaral (Eds.), *Markets in Higher Education: Rhetoric or Reality?* (pp. 161-184). Dordrecht: Kluwer Academic Publishers.
- Giddens, A. (1976). *New Rules of Sociological Method: A Positive Critique of Interpretative Sociologies*. London: Hutchinson.
- Giddens, A. (1990). *The Consequences of Modernity*. Stanford, CA: Stanford University Press.
- Giroux, H. A. (2002). Neoliberalism, corporate culture, and the promise of higher education: the university as a democratic public sphere. *Harvard Educational Review*, 72(4), 425-464.
- Gramsci, A. (1971). *Selections from the Prison Notebooks of Antonio Gramsci*. London: Lawrence & Wishart.
- Green, A. (2007). Globalisation and the changing nature of the state in East Asia. *Globalisation, Societies and Education*, 5(1), 23-38.
- Guri-Rosenblit, S., Sebková, H., & Teichler, U. (2007). Massification and diversity of higher education systems: interplay of complex dimensions. *Higher Education Policy*, 20(4), 373-389.
- Hammersley, M. (2011). *Methodology: Who needs it?* London: Sage.
- Harman, G. (2011). Competitors of rankings: new directions in quality assurance and



- accountability. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 35-53). Dordrecht: Springer Science and Business Media.
- Harvey, D. (2003). *The New Imperialism*. Oxford: Oxford University Press.
- Harvey, L. (2008). Rankings of higher education institutions: a critical review. *Quality in Higher Education*, 14(3), 187-207.
- Hatakenaka, S. (2004). *Internationalism in Higher Education: A Review*. London: Higher Education Policy Institute.
- Hawkins, J. N. (2008). Higher education transformation: some trends in California and Asia. *Policy Futures in Education*, 6(5), 532-544.
- Hawkins, J. N. (2010). Higher education transformation: some trends in California and Asia. In K. H. Mok (Ed.), *The Search for New Governance in Higher Education in Asia* (pp. 29-47). New York: Palgrave Macmillan.
- Hawkins, J. N., & Neubauer, D. (2011). *Regionalization and the harmonization of higher education in Asia: easier said than done*. Paper presented at the Senior Seminar on Higher Education Regionalization in Asia Pacific: Implications for Governance, Citizenship, and University Transformation.
- Hayhoe, R. (2000). Redeeming modernity. *Comparative Education Review*, 44(4), 423-439.
- Häyrynen-Alesto, M., & Peltola, U. (2006). The problem of a market-oriented university. *Higher Education*, 52(2), 251-281.
- Hazelkorn, E. (2007a). How do rankings impact on higher education. *IMHE Info*, December, 1-2.
- Hazelkorn, E. (2007b). The impact of league tables and ranking systems on higher education decision making. *Higher Education Management and Policy*, 19(2), 81-105.
- Hazelkorn, E. (2008). Learning to live with league tables and ranking: the experience of institutional leaders. *Higher Education Policy*, 21(2), 193-215.
- Hazelkorn, E. (2009). Rankings and the battle for world-class excellence: institutional strategies and policy choices. *Higher Education Management and Policy*, 21(1), 1-22.
- Hazelkorn, E. (2011). *Rankings and the Reshaping of Higher Education: The Battle for World-class Excellence*. Basingstoke: Palgrave Macmillan.
- Healey, N. M. (2008). Is higher education in really 'internationalising'? *Higher Education*, 55(3), 333-355.
- Higher Education Evaluation and Accreditation Council of Taiwan [HEEACT]. (2009). College Navigator in Taiwan. Retrieved 30 November, 2009, from <http://cnt.heeact.edu.tw>
- Higher Education Evaluation and Accreditation Council of Taiwan [HEEACT]. (2010a). *2010 Yearbook of Higher Education Evaluation and Accreditation Council of Taiwan*. Taipei: Higher Education Evaluation and Accreditation Council of Taiwan.
- Higher Education Evaluation and Accreditation Council of Taiwan [HEEACT]. (2010b). Performance Ranking of Scientific Papers for World Universities. Retrieved 30 November, 2010
- Higher Education Funding Council for England [HEFCE]. (2008). *Counting What is Measured or Measuring What Counts?: League Tables and Their Impact on Higher Education Institutions in England*. Bristol: Higher Education Funding Council for England.
- Henry, M., Lingard, B., Rizvi, F., & Taylor, S. (2001). *The OECD, Globalisation and Education Policy*. Oxford: IAU Press/Pergamon.
- Hickling-Hudson, A., Matthews, J., & Woods, A. (2004). Education, postcolonialism and disruptions. In A. Hickling-Hudson, J. Matthews & A. Woods (Eds.), *Disrupting Preconceptions: Postcolonialism and Education* (pp. 1-16). Flaxton: Post Pressed.
- Hill, D. (2003). Global neo-Liberalism, the deformation of education and resistance. *Journal for Critical Education Policy Studies*, 1. Retrieved 09 September, 2009, from [www.jceps.com/?pageID=article&articleID=7](http://www.jceps.com/?pageID=article&articleID=7)
- Hirsch, F. (1976). *Social Limits to Growth*. London: R. & K. Paul.
- Hirst, P., Thompson, G., & Bromley, S. (2009). *Globalization in Question*. Cambridge: Polity

- Press.
- Hollis, M. (1982). Education as a positional good. *Journal of Philosophy of Education*, 16(2), 235-244.
- Hollway, W., & Jefferson, T. (2000). *Doing Qualitative Research Differently: Free Association, Narrative and the Interview Method*. London: Sage Publications.
- Hossler, D. (1998). Everybody wants to be number one: the effects of the media's college rankings. In G. I. Maeroff (Ed.), *Imaging Education: The Media and Schools in America*. New York: Teachers College Press.
- Hou, Y.-C. A. (2008). A comparative study of national and global college rankings according to Berlin Principles and Usher & Savino's indicator model. *Evaluation in Higher Education*, 2(2), 113-142.
- Hou, Y.-C. A., & Morse, R. (2009). Quality assurance and excellence in Taiwan higher education - an analysis of three Taiwan major college rankings. *Evaluation in Higher Education*, 3(2), 45-41.
- Hsiao, F. H. (2005). The effects of chief leader selection model in higher education institution on the power relationship: a policy argumentation for the 2003 University Law mending protocol in Taiwan, Republic of China (ROC). *Education Policy Forum*, 8(1), 99-120.
- Hughes, J. A., & Sharrock, W. W. (2007). *Theory and Methods in Sociology: An Introduction to Sociological Thinking and Practice*. Basingstoke: Palgrave Macmillan.
- Huisman, J. (2007). The anatomy of autonomy. *Higher Education Policy*, 20(3), 219-221.
- Institute for Higher Education Policy [IHEP]. (2009). *Impact of College Rankings on Institutional Decision Making: Four Country Case Studies*. Washington, DC: Institute for Higher Education Policy.
- Information Portal for Accredited Self-financing Post-secondary Programmes [IPASS]. (2010). Enrolments of Full-time Accredited Self-financing Post-secondary Programmes Retrieved 22 October, 2010, from <http://www.ipass.gov.hk/eng/stat.aspx>
- Ishikawa, M. (2009). University Rankings, Global Models, and Emerging Hegemony: Critical Analysis from Japan. *Journal of Studies in International Education*, 13(2), 159-173.
- Jayasuriya, K. (2001). Globalization and the changing architecture of the state: the regulatory state and the politics of negative co-ordination. *Journal of European Public Policy*, 8(1), 101-123.
- Jayasuriya, K. (2005). Capacity beyond the boundary: new regulatory state, fragmentation and relational capacity. In M. Painter & J. Pierre (Eds.), *Challenges to State Policy Capacity: Global Trends and Comparative Perspectives* (pp. 19-37). Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.
- Jessop, B. (2002). *The Future of the Capitalist State*. Cambridge: Polity.
- Jin, G. Z., & Whalley, A. (2007). The power of information: how do U.S. news rankings affect the financial resources of public colleges?. *NBER Working Paper*. Retrieved 04 June, 2009, from <http://ssrn.com/abstract=963194>
- Jones, G. (2008). Can provincial universities be global institutions? rethinking the institution as the unit of analysis in the study of globalization and higher education. *Higher Education Policy*, 21(4), 457-468.
- Kao, M. M. T. (2004). The referendum phenomenon in Taiwan: solidification of Taiwan consciousness? *Asian Survey*, 44(4), 591-613.
- Keim, W. (2010). The internationalization of social sciences: distortions, dominations and prospects. In *World Social Science Report 2010: Knowledge Divides* (pp. 169-170). Paris: UNESCO.
- Kim, K. S., & Nam, S. (2007). The making of a world-class university at the periphery: Seoul National University. In P. G. Altbach & J. Balán (Eds.), *World Class Worldwide: Transforming Research Universities in Asia and Latin America* (pp. 122-142). Baltimore: The Johns Hopkins University Press.
- Kim, T. (2008). Restructuring higher education in South Korea: policy and practice – the public-private problem. *Policy Futures in Education*, 6(5), 558-568.
- King, A. D. (Ed.). (1991). *Culture, Globalization and the World System: Contemporary*

- Conditions for the Representation of Identity*. Basingstoke: Macmillan.
- Kirp, D. L. (2003). *Shakespeare, Einstein, and the Bottom Line: The Marketing of Higher Education*. Cambridge, Mass: Harvard University Press.
- Knight, J. (2002a). Trade creep: the implication of GATS for higher education policy. *International Higher Education*, 28(Summer), 5-7.
- Knight, J. (2002b). *Trade in Higher Education Services: The Implications of GATS*. London: The Observatory on Borderless Higher Education.
- Knight, J. (2011). *Analyzing the regionalization of higher education in Asia: functional, organizational and political approaches*. Paper presented at the Senior Seminar on Higher Education Regionalization in Asia Pacific: Implications for Governance, Citizenship, and University Transformation.
- Kooiman, J. (2000). Societal governance: levels, models, and orders of social-political interaction. In J. Pierre (Ed.), *Debating Governance* (pp. 138-166). Oxford: Oxford University Press.
- Kratoska, P. H. (2007, 2-5 August). English-language academic publishing in Asia. *ICAS5 supplement, ILAS Newsletter*.
- Kuan, C. M., Chang, M. K., Chang, H. H., & Ho, K. C. (2006). The gain and loss in academic internationalisation. *Humanities and Social Sciences Newsletter Quarterly*, 5(1), 1-20.
- Law, W. W. (2002). Education Reform in Taiwan: a search for a 'national' identity through democratisation and Taiwanisation. *Compare*, 32(1), 61-81.
- Law, W. W. (2003). Globalization, localization and education reform in a new democracy: Taiwan's experience In K. H. Mok & A. Welch (Eds.), *Globalization and Educational Restructuring in the Asia Pacific Region* (pp. 79-127). Houndmills: Palgrave Macmillan.
- Lawson, C. (2008). *Taiwan's Aim for the Top University Program: Innovation, Internationalisation and Opportunity*. Canberra: Australian Education International.
- Leisyte, L., Enders, J., & de Boer, H. (2009). The balance between teaching and research in Dutch and English universities in the context of university governance reforms. *Higher Education*, 58(5), 619-635.
- Lewis, H. R. (2006). *Excellence without a Soul: How A Great University Forgot Education*. New York: PublicAffairs.
- Li, M. (Ed.). (2009). *Soft Power: China's Emerging Strategy in International Politics*. Lanham: Lexington Books.
- Lichtman, M. (2010). *Qualitative Research in Education: A Users' Guide* (2nd ed.). Thousand Oaks: Sage Publications.
- Liefner, I. (2003). Funding, resource allocation, and performance in higher education systems. *Higher Education*, 46(4), 469-489.
- Liu, N. C. (2007a). Academic ranking of world universities: methodologies, problems and impact. Retrieved 1 March, 2007, from <http://www.griffith.edu.au/text/conference/university-rankings/content-papers.html>
- Liu, N. C. (2007b). Research universities in China: differentiation, classification and future world-class status. In P. G. Altbach & J. Balán (Eds.), *World Class Worldwide: Transforming Research Universities in Asia and Latin America* (pp. 54-70). Baltimore: The Johns Hopkins University Press.
- Liu, N. C. (2009). The story of academic rankings. *International Higher Education*, 54(Winter), 2-3.
- Liu, N. C., & Cheng, Y. (2005). The academic ranking of world universities. *Higher Education in Europe*, 30(2), 127-136.
- Liu, N. C., Cheng, Y., & Liu, L. (2004). Academic ranking of world universities using scientometrics: a comment to the "fatal attraction". *Scientometrics*, 64(1), 101-109.
- Liu, N. C., Wang, Q., & Cheng, Y. (Eds.). (2011). *Paths to A World-class University: Lessons from Practices and Experiences*. Rotterdam: Sense Publishers.
- Lo, W. Y. W. (2009). Reflections on internationalisation of higher education in Taiwan: perspectives and prospects. *Higher Education*, 58(6), 733-745.
- Lo, W. Y. W. (2010a). Decentralization of higher education and its implications for

- educational autonomy in Taiwan. *Asia Pacific Journal of Education*, 30(2), 127-139.
- Lo, W. Y. W. (2010b). Educational decentralization and its implications for governance: explaining the differences in the four Asian newly industrialised economies. *Compare*, 40(1), 63-78.
- Lo, W. Y. W. (2011). Soft power, university rankings and knowledge production: distinctions between hegemony and self-determination in higher education. *Comparative Education*, 47(2), 209-222.
- Lo, W. Y. W., & Weng, F. Y. (2005). Taiwan's responses to globalization: decentralization and internationalization of higher education. In K. H. Mok & R. James (Eds.), *Globalization and Higher Education in East Asia* (pp. 137-156). Singapore: Marshall Cavendish Academic.
- Longden, B., & Yorke, M. (2009). Institutional rankings, marketing, and the needs of intending students. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 35-46). Rotterdam: Sense Publishers.
- Lopez-Illescas, C., de Moya-Anegon, F., & Moed, H. F. (2011). A ranking of universities should account for differences in their disciplinary specialization. *Scientometrics*, 88(2), 563.
- Lu, M. L. (2003). The Making of World Class Research Universities in an Age of Globalization - Components and Challenges. Retrieved 26 February, 2007, from <http://english.moe.gov.tw/ct.asp?xItem=292&ctNode=369&mp=11>
- Lucas, L. (2006). *The Research Game in Academic Life*. Maidenhead: Open University Press.
- Luhmann, N. (1990). *Die Wissenschaft der Gesellschaft*. Frankfurt am Main: Suhrkamp.
- Lynch, D. C. (2004). Taiwan's self-conscious nation-building project. *Asian Survey*, 44(4), 513-533.
- Lynch, K. (2006). Neo-liberalism and marketisation: the implications for higher education. *European Educational Research Journal*, 5(1), 1-17.
- MacDonald, K. (2001). Using documents. In N. Gilbert (Ed.), *Researching Social Life* (2nd ed., pp. 194-210). London: Sage.
- Malpas, S. (2005). *The Postmodern*. London: Routledge.
- Marginson, S. (2000). *Entrepreneurial Universities*. Hong Kong: Comparative Education Policy Research Unit, Department of Public and Social Administration, City University of Hong Kong.
- Marginson, S. (2006). Dynamics of national and global competition in higher education. *Higher Education*, 52(1), 1-39.
- Marginson, S. (2007a). Global university rankings: implications in general and for Australia. *Journal of Higher Education Policy and Management*, 29(2), 131-142.
- Marginson, S. (2007b). The new higher education landscape: public and private goods, in global/national/local settings. In S. Marginson (Ed.), *Prospects of Higher Education: Globalization, Market Competition, Public Goods and the Future of the University* (pp. 29-78). Rotterdam: Sense Publishers.
- Marginson, S. (2008). Global field and global imagining: Bourdieu and worldwide higher education. *British Journal of Educational Studies*, 29(3), 303-315.
- Marginson, S. (2009a). Global university rankings: some potentials. In B. Stensaker & B. M. Kehm (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 85-96). Rotterdam: Sense Publisher.
- Marginson, S. (2009b). Open source knowledge and university rankings. *Thesis Eleven*, 96, 9-39.
- Marginson, S., & Rhoades, G. (2002). Beyond national states, markets and systems of higher education: a glonacal agency heuristic. *Higher Education*, 43(3), 282-309.
- Marginson, S., & Sawir, E. (2005). Interrogating global flows in higher education. *Globalisation, Societies and Education*, 3(3), 281-309.
- Marginson, S., & Sawir, E. (2006). University leaders' strategies in the global environment: a comparative study of Universitas Indonesia and the Australian National University. *Higher Education*, 52(2), 343-373.

- Marginson, S., & van der Wende, M. (2007a). *Globalisation and Higher Education*, OECD Education Working Paper No. 8. Paris: OECD.
- Marginson, S., & van der Wende, M. (2007b). To rank or to be ranked: the impact of global rankings in higher education. *Journal of Studies in International Education* 11(3/4), 306-329.
- Marshall, C., & Rossman, G. B. (2006). *Designing Qualitative Research* (4th ed.). Thousands Oaks, CA: Sage Publications.
- Mathews, J. A., & Hu, M.-C. (2007). Universities and public research institutions as drivers of economic development in Asia. In S. Yusuf & K. Nabeshima (Eds.), *How Universities Promote Economic Growth* (pp. 91-110). Washington, DC: World Bank.
- Matthews, J., & Sidhu, R. (2005). Desperately seeking the global subject: international education, citizenship and cosmopolitanism. *Globalisation, Societies and Education*, 3(1), 49-66.
- McGuire, M. D. (1995). Validity issues for reputational studies. In R. D. Walleri & M. K. Moss (Eds.), *Evaluating and Responding to College Guidebooks and Rankings* (pp. 45-59). San Francisco, CA: Jossey-Bass.
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass Publishers.
- Merton, R. K. (1948). The Self-Fulfilling Prophecy. *Antioch Review*, 8(2), 193-210.
- Miller, J., & Glasser, B. (2011). The "inside" and the "outside": finding realities in interviews. In D. Silverman (Ed.), *Qualitative Research: Issues of Theory, Method and Practice* (pp. 131-148). London: Sage Publications.
- Mitchell, G. J., & Cody, W. K. (1993). The Role of Theory in Qualitative Research. *Nursing Science Quarterly*, 6(4), 170-178.
- Mittelman, J. H. (1996). *Globalization: Critical Reflections*. Boulder, Colorado: Lynne Rienner Publishers.
- Ministry of Education [MOE], Taiwan. (2000). *List of Projects for the First Round of the Program for Promoting Academic Excellence of Universities*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2001). *White Paper on University Education Policy*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2006). *Teachers' Law*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2007a). *The Annual Report of Ministry of Education for the Legislative Yuan*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2007b). *University Evaluation Regulation*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2007c). *University Law*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2008). *2007 Education in Taiwan*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2009a). Program for Encouraging Teaching Excellence in Universities. Retrieved 30 November, 2009, from [www.csal.fcu.edu.tw/edu/program\\_index.asp](http://www.csal.fcu.edu.tw/edu/program_index.asp)
- Ministry of Education [MOE], Taiwan. (2009b). Program for Nurturing Talented in Key Areas. Retrieved 30 November, 2009, from [www.csal.fcu.edu.tw/edu/imp\\_index.asp](http://www.csal.fcu.edu.tw/edu/imp_index.asp)
- Ministry of Education [MOE], Taiwan. (2009c). Program for Regional Teaching Resource Centre. Retrieved 30 November, 2009, from [www.csal.fcu.edu.tw/Edu/resources\\_index.asp](http://www.csal.fcu.edu.tw/Edu/resources_index.asp)
- Ministry of Education [MOE], Taiwan. (2010a). *2009 Education in Taiwan*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2010b). *Education Statistics, The Republic of China*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2010c). *Higher Education of Republic of China, 2010*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (2010d). Program for Aiming for Top University.

Retrieved 31 July, 2010, from [http://www.edu.tw/files/list/B0069/發展國際一流大學及頂尖研究中心修正計畫書\(97修正核定版\).pdf](http://www.edu.tw/files/list/B0069/發展國際一流大學及頂尖研究中心修正計畫書(97修正核定版).pdf)

- Ministry of Education [MOE], Taiwan. (2010e). Program for Encouraging Teaching Excellence in Universities. Retrieved 31 July, 2010, from [http://www.edu.tw/files/list/B0039/附件-2\\_第二期獎勵大學教學卓越計畫\\_980312-.pdf](http://www.edu.tw/files/list/B0039/附件-2_第二期獎勵大學教學卓越計畫_980312-.pdf)
- Ministry of Education [MOE], Taiwan. (2011). *2010/2011 Education in Taiwan*. Taipei: Ministry of Education.
- Ministry of Education [MOE], Taiwan. (various years). Key Educational Statistics. Retrieved 27 November, 2009, from [www.edu.tw/statistics/index.aspx](http://www.edu.tw/statistics/index.aspx)
- Ministry of Education [MOE], China. (2009). 2008 Statistics of Education. Retrieved 22 October, 2010, from <http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/s4633/index.html>
- Ministry of Foreign Affairs [MOFA], Taiwan. (2009). Diplomatic Allies. Retrieved 14 November, 2009, from [www.mofa.gov.tw](http://www.mofa.gov.tw)
- Ministry of Higher Education [MOHE], Malaysia. (2008). The Ministry's Website. Retrieved 20 October, 2008, from [www.mohe.gov.my](http://www.mohe.gov.my)
- Mohrman, K., Ma, W., & Baker, D. (2008). The research university in transition: the emerging global model. *Higher Education Policy*, 21(3), 5-27.
- Mok, K. H. (2007a). Globalization, state capacity and changing higher education governance in East Asia. *Globalization, Societies & Education*, 5(3), 1-21.
- Mok, K. H. (2007b). The quest for 'world-class' status: university responses and strategies in Asia. *The Journal of Comparative Asian Development*, 6(1), 1-20.
- Mok, K. H. (2008a). University restructuring experiences in Asia: myth and reality. *Policy Futures in Education*, 6(5), 528-531.
- Mok, K. H. (2008b). Varieties of regulatory regimes in Asia: the liberalization of the higher education market and changing governance in Hong Kong, Singapore and Malaysia. *The Pacific Review*, 21(2), 147-170.
- Mok, K. H. (2010a). Emerging regulatory regionalism in university governance: a comparative study of China and Taiwan. *Globalisation, Societies and Education*, 8(1), 87-103.
- Mok, K. H. (Ed.). (2010b). *The Search for New Governance in Higher Education in Asia*. New York: Palgrave Macmillan.
- Mouzelis, N. P. (2008). *Modern and Postmodern Social Theorizing: Bridging the Divide*. Cambridge: Cambridge University Press.
- Murphy, P., Peters, M. A., & Marginson, S. (2010). *Imagination: Three Models of Imagination in the Age of the Knowledge Economy*. New York: Peter Lang.
- National Center for Education Statistics [NCES], the USA. (2010). *Postsecondary Institutions and Price of Attendance in the United States: Fall 2009, Degrees and Other Awards Conferred: 2008-09, and 12-Month Enrollment: 2008-09*. Washington, DC: National Center for Education Statistics.
- Neubauer, D. (2008). The historical transformation of public good. *Journal of Asian Public Policy*, 1(2), 127-138.
- Neubauer, D. (2010). Ten globalization challenges to higher education quality and quality assurance. *Evaluation in Higher Education*, 4(1), 13-37.
- Neubauer, D. (2011). *Reprise of concept paper*. Paper presented at the Senior Seminar on Higher Education Regionalization in Asia Pacific: Implications for Governance, Citizenship, and University Transformation.
- Neubauer, D., & Hawkins, J. N. (Eds.). (2012). *Regionalism in Asia-Pacific Higher Education*. London: Palgrave Macmillan.
- Neuman, W. L. (2011). *Social Research Methods: Qualitative and Quantitative Approaches* (7th ed.). Boston: Pearson/Allyn & Bacon.
- Newman, F., Couturier, L., & Scurry, J. (2004). *The Future of Higher Education: Rhetoric, Reality, and the Risks of the Market*. San Francisco: Jossey-Bass.

- Ngok, K., & Guo, W. (2008). The quest for world-class universities in China: critical reflections. *Policy Futures in Education*, 6(5), 545-557.
- Niland, J. (2000). The challenge of building world class universities in the Asian region. *Online Opinion*. Retrieved 20 October, 2008, from [www.onlineopinion.com.au/view.asp?article=997](http://www.onlineopinion.com.au/view.asp?article=997)
- Niland, J. (2007). The challenge of building world-class universities. In J. Sadlak & N. C. Liu (Eds.), *The World-class University and Ranking: Aiming Beyond Status* (pp. 61-71). Bucharest: UNESCO-CEPES.
- Ninnes, P., & Burnett, G. (2003). Comparative education research: poststructuralist possibilities. *Comparative Education*, 39(3), 279-297.
- National Science Council [NSC], Taiwan. (2005). *Yearbook of Science and Technology, Taiwan ROC, 2005*. Taipei: National Science Council.
- National Science Council [NSC], Taiwan. (2010). The Council's Website. Retrieved 10 August, 2010, from [www.nsc.gov.tw](http://www.nsc.gov.tw)
- Nye, J. (1990). *Bound to Lead: The Changing Nature of American Power*. New York: Basic Books.
- Nye, J. (2002). *The Paradox of American Power: Why the World's Only Superpower Can't Go It Alone*. Oxford: Oxford University Press.
- Nye, J. (2004). *Soft Power: The Means to Success in World Politics*. New York: Public Affairs.
- Organization For Economic Cooperation And Development [OECD]. (1996). *The Knowledge-Based Economy*. Paris: Organization For Economic Cooperation And Development.
- Organization For Economic Cooperation And Development [OECD]. (2004). *Internationalization and Trade in Higher Education: Opportunities and Challenges*. Paris: Organization For Economic Cooperation And Development.
- Organization For Economic Cooperation And Development [OECD]. (2007). *OECD Science, Technology and Industry Scoreboard*. Paris: Organization For Economic Cooperation And Development.
- Organization For Economic Cooperation And Development [OECD]. (2008). *Education at a Glance: OECD Indicators*. Paris: Organization For Economic Cooperation And Development.
- Olssen, M., & Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: from the free market to knowledge capitalism. *Journal of Education Policy*, 20(3), 313-345.
- Osborne, D., & Gaebler, T. (1992). *Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector*. Reading, MA: Addison-Wesley.
- Packer, M. (2011). *The Science of Qualitative Research*. New York: Cambridge University Press.
- Palfreyman, D., & Tapper, T. (2009). What is an 'elite' or 'leading global university'? In D. Palfreyman & T. Tapper (Eds.), *Structuring Mass Higher Education: The Role of Elite Institutions* (pp. 203-218). New York: Routledge.
- Parker, P. M. (2005). *Higher Education in Taiwan: A Strategic Reference, 2003*. Retrieved 14 November, 2009, from [www.icongrouponline.com](http://www.icongrouponline.com)
- Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.). Newbury Park, CA: Sage Publications.
- Peters, M. A. (2008). Education and the knowledge economy. In G. Hearn & D. Rooney (Eds.), *Knowledge Policy: Challenges for the 21st Century* (pp. 27-44). Cheltenham: Edward Elgar.
- Peters, M. A., & Besley, T. (2006). *Building Knowledge Cultures: Education and Development in the Age of Knowledge Capitalism*. Lanham, MD: Rowman & Littlefield Publishers.
- Postiglione, G. A. (2005). Questioning centre-periphery platforms. *Asia Pacific Journal of Education*, 25(2), 209-225.
- Prado, C. G. (1995). *Starting with Foucault: An Introduction to Genealogy*. Boulder: Westview Press.

- QS World University Rankings. (2011). Top Universities. Retrieved 1 June, 2011, from <http://www.topuniversities.com>
- Rhodes, R. A. W. (1996). The new governance: governing without government. *Political Studies*, 44(4), 652-667.
- Rhodes, R. A. W. (2000). Governance and public administration. In J. Pierre (Ed.), *Debating Governance* (pp. 54-90). Oxford: Oxford University Press.
- Rikowski, G. (2003). Schools and the GATS Enigma. *Journal for Critical Education Policy Studies*, 1. Retrieved 09 September, 2009, from [www.iceps.com/?pageID=article&articleID=8](http://www.iceps.com/?pageID=article&articleID=8)
- Rist, G. (1997). *The History of Development: From Western Origins to Global Faith*. London: Zed Books.
- Ritzer, G. (2002). Enchanting McUniversity: toward a spectacularly irrational university quotidian. In D. Hayes & R. Wynyard (Eds.), *McDonaldization of Higher Education* (pp. 19-32). Westport, Conn: Bergin & Garvey.
- Roberts, D., & Thompson, L. (2007). *University League Tables and The Impact on Student Recruitment, Reputation Management for Universities, Working Paper Series No. 2*. Leeds, Cambridge and Brisbane: The Knowledge Partnership.
- Robertson, S. L. (2010). The EU, 'regulatory state regionalism' and new modes of higher education governance. *Globalisation, Societies and Education*, 8(1), 23-37.
- Rolfe, H. (2003). University strategy in an age of uncertainty: the effect of higher education funding on old and new universities. *Higher Education Quarterly*, 57(1), 24-47.
- Russell Group. (n.d.). The Concentration of Research Funding in the UK: Driving Excellence and Competing Globally. Retrieved 31 July, 2010, from <http://www.russellgroup.ac.uk/uploads/Concentration-of-research-funding.pdf>
- Rust, V. D. (1991). Postmodernism and its comparative education implications. *Comparative Education Review*, 35(4), 610-626.
- Sadlak, J. (2006). Validity of university ranking and its ascending impact on higher education in Europe. *Bridge*, 12. Retrieved 04 June, 2009, from [www.ostina.org/content/view/1701/626](http://www.ostina.org/content/view/1701/626)
- Sadlak, J. (2007). Developments in higher education and how they stimulate the university rankings' phenomenon. In J. Sadlak & N. C. Liu (Eds.), *The World-class University and Ranking: Aiming Beyond Status* (pp. 75-85). Bucharest: UNESCO-CEPES.
- Sadlak, J. (2010). Quality challenge in a changing landscape of higher education: place and impact of academic rankings. *Evaluation in Higher Education*, 4(1), 1-12.
- Sadlak, J., & Liu, N. C. (Eds.). (2007). *The World-class University and Ranking: Aiming Beyond Status*. Bucharest: UNESCO-CEPES.
- Salmi, J. (2007). Autonomy from the state vs responsiveness to markets. *Higher Education Policy*, 20(3), 223-242.
- Salmi, J., & Liu, N. C. (2011). Paths to a world-class university. In N. C. Liu, Q. Wang & Y. Cheng (Eds.), *Paths to A World-class University: Lessons from Practices and Experiences* (pp. ix-xviii). Rotterdam: Sense Publishers.
- Salmi, J., & Saroyan, A. (2007). League tables as policy instruments: uses and misuses. *Higher Education Management and Policy*, 19(2), 24-62.
- Sauder, M., & Espeland, W. N. (2009). The discipline of rankings: tight coupling and organizational change. *American Sociological Review*, 74(1), 63-82.
- Sauder, M., & Lancaster, R. (2006). Do rankings matter? The effects of U.S. News & World Report rankings on the admissions process of law schools. *Law & Society Review*, 40(1), 105-134.
- Scharpf, F. (1994). Games real actors could play: positive and negative coordination in embedded negotiations. *Journal of Theoretical Politics*, 6(1), 27-53.
- Schleef, D. J. (2006). *Managing Elites: Professional Socialization in Law and Business Schools*. Lanham: Rowman & Littlefield.
- Schofer, E., & Meyer, J. W. (2005). The worldwide expansion of higher education in the twentieth century. *American Sociological Review*, 70(6), 898-920.
- Scholte, J. A. (2005). Globalization and the rise of super territoriality. In G. Lachapelle & S.



- Paquin (Eds.), *Mastering Globalization: New Sub-states' Governance and Strategies* (pp. 13-37). London Routledge.
- Schubert, G. (2004). Taiwan's political parties and national identity: the rise of an overarching consensus. *Asian Survey*, 44(4), 534-554.
- Schutz, A. (1972). *The Phenomenology of the Social World*. London: Heinemann Educational.
- Scott, J. (1990). *A Matter of Record: Documentary Sources in Social Research*. Cambridge: Polity Press
- Scott, J. C. (2006). The Mission of the University: Medieval to Postmodern Transformations. *Journal of Higher Education*, 77(1), 1-39.
- Seglen, P. O. (1997). Why the impact factor of journals should not be used for evaluating research. *British Medical Journal*, 317(7079), 498-502.
- ShanghaiRanking Consultancy. (2009). Academic Ranking of World Universities - 2009. Retrieved 20 October, 2009, from [www.arwu.org/ARWU2009.jsp](http://www.arwu.org/ARWU2009.jsp)
- ShanghaiRanking Consultancy. (2010). Academic Ranking of World Universities. Retrieved 29 December, 2010, from <http://www.arwu.org>
- Sharma, Y. (2010, 29 August). Taiwan: way clear for Chinese students next year. *University World News*,
- Sheil, T. (2010). Moving beyond university rankings: developing a world class university system in Australia. *Australian Universities' Review*, 52(1), 69-76.
- Sherman, R. R., & Webb, R. B. (1988). Qualitative research in education: a focus. In R. R. Sherman & R. B. Webb (Eds.), *Qualitative Research in Education: Focus and Methods* (pp. 1-21). London: Falmer Press.
- Shin, J. C. (2011). Organizational effectiveness and university rankings. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 19-34). Dordrecht: Springer Science and Business Media.
- Shin, J. C., & Toutkoushian, R. K. (2011). The past, present, and future of University rankings. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 1-16). Dordrecht: Springer Science and Business Media.
- Sidhu, R. K. (2006). *Universities and Globalization: To market, To market* Mahwah, N.J.; London: Lawrence Erlbaum Associates.
- Silverman, D. (2011). Introducing qualitative research. In D. Silverman (Ed.), *Qualitative Research: Issues of Theory, Method and Practice* (pp. 3-12). London: Sage Publications.
- Simon, D. F., & Kau, M. Y. M. (Eds.). (1992). *Taiwan: Beyond the Economic Miracle*. Armonk, NY: M.E. Sharpe.
- Smith, D. C. (1977). *Higher Education in Taiwan: The Confucius-Dewey Synthesis*. Taipei: Pacific Cultural Foundation.
- Smith, H. (2000). *Industry Policy in Taiwan and Korea in the 1980s: Winning with the Market*. Cheltenham: Edward Elgar Pub.
- Social Sciences Research Centre of National Science Council. (2009). TSSCI. Retrieved 01 December, 2009, from <http://ssrc.sinica.edu.tw/ssrc-home/index.php>
- Song, M.-M., & Tai, H.-H. (2007). Taiwan's responses to globalisation: internationalisation and questing for world class universities *Asia Pacific Journal of Education*, 27(3), 323-340.
- Sörlin, S. (2007). Funding diversity: performance-based funding regimes as drivers of differentiation in higher education systems. *Higher Education Policy*, 20(4), 413-440.
- Sowter. (2007). THES - QS World University Rankings: background, context, approach, results and maximising effectiveness. Retrieved 1 March, 2007, from <http://www.griffith.edu.au/text/conference/university-rankings/content-papers.html>
- Spring, J. (2008). Research on globalization and education. *Review of Educational Research*, 78(2), 330-363.
- St. George, E. (2006). Positioning higher education for the knowledge based economy. *Higher Education*, 52(4), 589-610.

- Stake, R. E. (1995). *The Art of Case Study Research*. Thousand Oaks, CA: Sage Publications.
- Stake, R. E. (2010). *Qualitative Research: Studying How Things Work*. New York: Guilford Press.
- Stella, A., & Woodhouse, D. (2006). *Ranking of Higher Education Institutions* (Vol. 6). Melbourne: Australian Universities Quality Agency.
- Stensaker, B., & Kehm, B. M. (2009a). Introduction. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. vii-xix). Rotterdam: Sense Publishers.
- Stensaker, B., & Kehm, B. M. (Eds.). (2009b). *University Rankings, Diversity, and the New Landscape of Higher Education*. Rotterdam: Sense Publisher.
- Stewart, J. (2005). Educational policy: politics, markets and the decline of 'publicness'. *Policy & Politics*, 33(3), 475-487.
- Strathern, M. (1997). "Improving ratings": audit in the British university system. *European Review*, 5(3), 305-321.
- Strathern, M. (Ed.). (2000). *Audit Cultures: Anthropological Studies in Accountability, Ethics, and the Academy*. London: Routledge.
- Stromquist, N. P. (2002). *Education in a Globalized World: The Connectivity of Economic Power, Technology, and Knowledge*. Lanham, MD: Rowman & Littlefield Publishers.
- Stuart, D. (1995). Reputational rankings: background and development. In R. D. Walleri & M. K. Moss (Eds.), *Evaluating and Responding to College Guidebooks and Rankings* (pp. 13-20). San Francisco, CA: Jossey-Bass.
- Sturrock, J. (2003). *Structuralism* (2nd ed.). Malden, MA: Blackwell Publishing.
- Sutz, J. (1997). The new role of the university in the productive sector. In H. Etzkowitz & L. Leydesdorff (Eds.), *Universities and the Global Knowledge Economy* (pp. 11-20). London: Pinter.
- Tai, H.-H. (2007). The features of a world-class university: lessons from international ranking. In J. Sadlak & N. C. Liu (Eds.), *The World-class University and Ranking: Aiming Beyond Status* (pp. 39-54). Bucharest: UNESCO-CEPES.
- Teichler, U. (2009). Between over-diversification and over-homogenization: five decades of search for a creative fabric of higher education. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 155-182). Rotterdam: Sense Publishers.
- Teichler, U. (2011a). The future of university rankings. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 259-265). Dordrecht: Springer Science and Business Media.
- Teichler, U. (2011b). Social contexts and systemic consequence of university rankings: a meta-analysis of the ranking literature. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 55-69). Dordrecht: Springer Science and Business Media.
- Tertiary Education Services Office of the Government of the Macao SAR. (2009). *Staff and Students Data of Higher Education Institutions of Macao*. Macao: Tertiary Education Services Office of the Government of the Macao SAR.
- Thakur, M. (2007). The impact of ranking systems on higher education and its stakeholders. *Journal of Institutional Research*, 13(1), 83-96.
- Times Higher Education [THE]. (2009). Background/Methodology. Retrieved 19 June, 2009, from [www.topuniversities.com/worlduniversityrankings/methodology](http://www.topuniversities.com/worlduniversityrankings/methodology)
- Times Higher Education [THE]. (2010). Times Higher Education World University Rankings. Retrieved 29 December, 2010, from <http://www.timeshighereducation.co.uk/world-university-rankings>
- Times Higher Education [THE]. (2011). New: World Reputation Rankings 2011. Retrieved 1 June, 2011, from <http://www.timeshighereducation.co.uk/world-university-rankings>
- Thorbecke, E., & Wan, H. (2007). Taiwan's development experience: stability with growth, 1950-2002. In R. Ash & J. M. Greene (Eds.), *Taiwan in the 21st Century: Aspects and*

- Limitations of a Development Model* (pp. 54-73). London: Routledge.
- Tien, F. F. (2008). Incorporation of national university in Taiwan: challenges for the government and the academics. *Policy Futures in Education*, 6(5), 616-628.
- Tight, M. (2000). Do league tables contribute to the development of a quality culture? football and higher education compared. *Higher Education Quarterly*, 54(1), 22-42.
- Tikly, L. (2001). Globalisation and education in the postcolonial world: towards a conceptual framework. *Comparative Education*, 37(2), 151-171.
- Tikly, L. (2004). Education and the new imperialism. *Comparative Education*, 40(2), 173-198.
- Toutkoushian, R. K., & Webber, K. (2011). Measuring the research performance of postsecondary institutions. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 123-144). Dordrecht: Springer Science and Business Media.
- Trow, M. (1974). Problems in the transition from elite to mass higher education. In *Policies for Higher Education: General Report* (pp. 55-101). Paris: OECD.
- Tsai, S.-L., & Shavit, Y. (2007). Taiwan: higher education - expansion and equality of educational opportunity. In Y. Shavit, R. Arum & A. Gamoran (Eds.), *Stratification in Higher Education: A Comparative Study* (pp. 140-164). Stanford, CA: Stanford University Press.
- Tsang, S. (2007). Democratization in a Chinese community: lessons from Taiwan. In R. Ash & J. M. Greene (Eds.), *Taiwan in the 21st Century: Aspects and Limitations of a Development Model* (pp. 177-193). London: Routledge.
- Tucker, V. (1999). The myth of development: a critique of a Eurocentric discourse. In R. Munck & D. O'Hearn (Eds.), *Critical Development Theory: Contributions to a New Paradigm* (pp. 1-26). London: Zed Books.
- Turner, D. (2005). Benchmarking in universities: league tables revisited. *Oxford Review of Education*, 31(3), 353-371.
- University Grants Committee [UGC], Hong Kong. (2010). Statistics. Retrieved 22 October, 2010, from <http://cdcf.ugc.edu.hk/cdcf/statIndex.do?language=EN>
- United Nations Educational Scientific and Cultural Organisation [UNESCO]. (2000). *Globalization and Living Together: The Challenge for Educational Content in Asia*. Paris: United Nations Educational Scientific and Cultural Organisation.
- United Nations Educational Scientific and Cultural Organisation [UNESCO]. (2010). *World Social Science Report: Knowledge Divides*. Paris: United Nations Educational Scientific and Cultural Organisation.
- Usher, A. (2008). Rankings 2.0: the future of university rankings. *Evaluation in Higher Education*, 2(2), 51-76.
- Usher, A. (2009). University rankings 2.0: new frontiers in institutional comparisons. *Australian Universities' Review*, 51(2), 87-90.
- Usher, A., & Medow, J. (2009). A global survey of university rankings and league tables. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 3-18). Rotterdam: Sense Publishers.
- Usher, A., & Savino, M. (2006). *A World of Difference: A Global Survey of University League Tables*. Toronto, ON: Educational Policy Institute.
- University System of Taiwan [UST]. (2009). University System of Taiwan. Retrieved 28 November, 2009, from [www.ust.edu.tw](http://www.ust.edu.tw)
- Vaira, M. (2004). Globalization and higher education organizational change: a framework for analysis. *Higher Education*, 48(4), 483-510.
- Vaira, M. (2009). Towards unified and stratified systems of higher education? system convergence and organizational stratified. In B. M. Kehm & B. Stensaker (Eds.), *University Rankings, Diversity, and the New Landscape of Higher Education* (pp. 135-154). Rotterdam: Sense Publishers.
- van der Wende, M. (2007). Internationalization of higher education in the OECD countries: challenges and opportunities for the coming decade. *Journal of Studies in International Education*, 11 (3/4), 274-289.
- van der Wende, M., & Westerheijden, D. (2009). Rankings and classifications: the need for a

- multidimensional approach. In F. van Vught (Ed.), *Mapping the Higher Education Landscape: Towards a European Classification of Higher Education* (pp. 71-86). Dordrecht: Springer.
- van Raan, A. F. J. (2010). The social sciences and the ranking of universities. In *World Social Science Report 2010: Knowledge Divides* (pp. 237-238). Paris: UNESCO.
- van Vught, F. A. (1998). *Governmental Strategies and Innovation in Higher Education*. London: Jessica Kingsley.
- van Vught, F. A. (2008). Mission diversity and reputation in higher education. *Higher Education Policy*, 21(2), 151-174.
- van Vught, F. A. (Ed.). (2009). *Mapping the Higher Education Landscape: Towards a European Classification of Higher Education*. Dordrecht: Springer.
- Wade, R. (1995). Resolving the state-market dilemma in East Asia. In H. J. Chang & R. Rowthorn (Eds.), *The Role of the State in Economic Change* (pp. 114-136). Oxford: Oxford University Press.
- Wallerstein, I. (1974). *The Modern World-system*. New York: Academic Press.
- Wang, R. J. (2003). From elitism to mass higher education in Taiwan: the problems faced. *Higher Education*, 46(3), 261-287.
- Waters, M. (1995). *Globalization*. London: Routledge.
- Watson, D. (2007). *Managing Civic and Community Engagement*. Maidenhead: McGraw Hill/Open University Press.
- Watson, P. (2009). Regional themes and global means in supra-national higher education policy. *Higher Education*, 58(3), 419-438.
- Watson, S. (2000). Foucault and the study of social policy. In G. Lewis, S. Gewirtz & J. Clarke (Eds.), *Rethinking Social Policy* (pp. 66-77). London: Sage Publications.
- Webber, K. L. (2011). Measuring faculty productivity. In J. C. Shin, R. K. Toutkoushian & U. Teichler (Eds.), *University Rankings: Theoretical Basis, Methodology and Impacts on Global Higher Education* (pp. 105-121). Dordrecht: Springer Science and Business Media.
- Weber, M. (1968). *Economy and Society: An Outline of Interpretive Sociology*. New York: Bedminster Press.
- Webster, D. S. (1986). *Academic Quality Rankings of American Colleges and Universities*. Springfield, IL: Charles C. Thomas.
- Weidman, J. C., & Enkhjargal, A. (2008). Corruption in Higher Education. In D. P. Baker & A. W. Wiseman (Eds.), *The Worldwide Transformation of Higher Education* (pp. 63-88). Bingley: JAI.
- Weiler, H. N. (2000). States, markets and university funding: new paradigms for the reform of higher education in Europe. *Compare*, 30(3), 333-339.
- Welch, A. (2002). Going global? internationalizing Australian universities in a time of global crisis. *Comparative Education Review*, 46(4), 433-471.
- Welch, A. (2003). The discourse of discourse analysis: a response to Ninnes and Burnett. *Comparative Education*, 39(3), 303-306.
- Welch, A. (2007). Technocracy, uncertainty, and ethics: comparative education in an era of postmodernity and globalization. In R. F. Arnove & C. A. Torres (Eds.), *Comparative Education: The Dialectic of the Global and the Local* (3rd ed., pp. 21-45). Lanham, Md.: Rowman & Littlefield Publishers.
- Weng, F. Y. (2003). Centralization and decentralization in educational governance in Taiwan. In K. H. Mok (Ed.), *Centralization and Decentralization: Educational Reforms and Changing Governance in Chinese Societies* (pp. 39-58). Hong Kong: Comparative Education Research Centre, University of Hong Kong; Kluwer Academic Publishers.
- White, G. D., & Hauck, F. C. (Eds.). (2000). *Campus, Inc.: Corporate Power in the Ivory Tower*. Amherst, NY: Prometheus Books.
- Williams, D., & Young, T. (1994). Governance, the World Bank and liberal theory. *Political Studies*, 42(1), 84-100.
- Williams, G. (Ed.). (2003). *The Enterprising University: Reform, Excellence and Equity*. Buckingham: Open University Press.

- Williams, R., & Van Dyke, N. (2008). Reputation and reality: ranking major disciplines in Australian universities. *Higher Education*, 56(1), 1-28.
- Winston, G. C. (2001). The positional arms race in higher education. In *Forum Futures 2001* (pp. 19-22). Cambridge, MA: Educause.
- Woo, J. H. (1991). Education and economic growth in Taiwan: a case of successful planning. *World Development*, 19(8), 1029-1044.
- World Bank. (2002). *Building Institutions for Markets: World Bank Development Report 2002*. New York: Oxford University Press.
- World Bank. (2003). *Lifelong Learning in the Global Knowledge Economy*. Washington, DC: World Bank.
- Wu, W.-H., Chen, S.-F., & Wu, C.-T. (1989). The development of higher education in Taiwan. In P. G. Altbach & V. Selvaratnam (Eds.), *From Dependence to Autonomy: The Development of Asian Universities* (pp. 257-276). Dordrecht: Kluwer Academic.
- Yang, R. (2007). China's soft power projection. *International Higher Education*, 46(Winter), 24-25.
- Yang, R. (2010). Soft power and higher education: an examination of China's Confucius Institutes. *Globalisation, Societies and Education*, 8(2), 235-245.
- Yonezawa, A. (2007). Japanese flagship universities at a crossroads. *Higher Education*, 54(4), 483-499.
- Yonezawa, A. (2011). The global "30" and the consequences of selecting "world-class" universities in Japan. In N. C. Liu, Q. Wang & Y. Cheng (Eds.), *Paths to A World-class University: Lessons from Practices and Experiences* (pp. 67-82). Rotterdam: Sense Publishers.
- Yulin Chiayi and Tainan Regional Teaching Resource Centre. (2009). Yulin, Chiayi and Tainan Regional Teaching Resource Centre. Retrieved 29 November, 2009, from <http://yct.acad.ncku.edu.tw>
- Zha, Q. (2003). Internationalization of higher education: towards a conceptual framework. *Policy Futures in Education*, 1(2), 248-270.
- Zha, Q. (2009). Diversification or homogenization in higher education: a global allomorphism perspective. *Higher Education in Europe*, 34(3-4), 459-479.
- Zhang, W.-B. (2003). *Taiwan's Modernization: Americanization and Modernizing Confucian Manifestations*. Singapore: World Scientific.
- Zhao, C.-M. (2007). Building world-class universities: some unintended impacts of university ranking. In J. Sadlak & N. C. Liu (Eds.), *The World-class University and Ranking: Aiming Beyond Status* (pp. 321-331). Bucharest: UNESCO-CEPES.